SOUTH KOREAN ELEMENTARY SCHOOL TEACHERS' PERCEPTIONS OF PROFESSIONAL CURRICULAR AUTONOMY

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I dedicate this work:

To God: I am sincerely thankful you gave me wisdom, guidance, and encouragement whenever I was in trouble and warm and supporting family.

To my parents, Min Byunggue and Sun Geumok: I am so grateful to have you as my parents. Thanks for your endless support and patience.

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Mina Min

SOUTH KOREAN ELEMENTARY SCHOOL TEACHERS' PERCEPTIONS OF PROFESSIONAL CURRICULAR AUTONOMY

With increasingly diverse formal education settings around the globe, teachers' ability to differentiate curriculum is essential to meet the needs of students with varied cultural, socioeconomic, racial, and linguistic backgrounds. Teachers' curricular autonomy is a prerequisite to diversify curriculum. Guided by sociocultural approaches to agency and social cognitive theory, this quantitative survey study investigates how teachers are situated in the distinct cultures of specific schools and societies. In particular, this study examines how South Korean teachers' relationships with their principals, co-workers, and students and the Confucian values of collectivism and authoritarianism influence their self-efficacy and outcome expectancy in exercising curricular autonomy as well as their current and desired practices for diversifying curriculum. This study also examines whether teachers' workloads influence their practices of exercising curricular autonomy.

A total of 822 public elementary school teachers in South Korea participated in both the pilot (n=195) and primary studies (n=627). Exploratory and confirmatory factor analyses (EFA & CFA) and structural equation modeling (SEM) were employed to analyze the data. The findings indicated that teachers are more likely to exercise autonomy to diversify curriculum when they are supported by their colleagues and principals, giving them a high level of collectivism, self-efficacy and outcome expectancy in exercising curricular autonomy. The study also found that the two individual traits encourage them to exercise curricular autonomy as well as to desire more curricular autonomy, while sociocultural factors only influenced teachers' current practices. Moreover, teachers' self-efficacy and outcome expectancy in exercising

curricular autonomy were increased via the support of principals and students and decreased if they strongly valued authoritarianism. Lastly, it was found that teachers' workloads did not influence either their current or desired practices for exercising autonomy to diversify curriculum.

This study is significant as it views teachers as critical change agents in the achievement of diversity and social justice. It also broadens and deepens educational scholars' and policymakers' understanding of the conditions for and effective ways to promote their agency to diversify curriculum. Lastly, it argues that "autonomy" is a culturally variable term and must be understood in a way that reflects contextual differences.

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Chapter 1: Introduction

Professional autonomy has long been a topic of interest within disciplines that concern employees' psychological empowerment (Klecker & Loadman, 1998; Schermuly, Schermuly, & Meyer, 2011; Short & Rinehart, 1992). Defined in multiple ways such as self-directing freedom, self-governing state, and independence (Verhagen, 2003; Ryan & Deci, 2006), a number of studies have claimed that ensuring employee autonomy plays a positive and crucial role in increasing job satisfaction, creativity, self-efficacy, job retention, and professionalism, while decreasing job stress and improving work effectiveness (E. S. C. Ho, 2005; Pearson & Moomaw, 2005; Wang & Cheng, 2010). Teachers are employees of educational organizations such as schools, districts, and, in some cases, national departments of education; moreover, their autonomy within those organizations has been widely cited as evidence of their professional, as opposed to semi-professional or technical, status (Wermke & Höstfält, 2013).

Multiple facets of teacher autonomy have been discussed in the field of education, one of which is teacher autonomy over curricula. In existing studies, teachers' curricular autonomy has been widely discussed in relation to its positive association with improvements in students' academic performance, in addition to teachers' professionalism and commitment to their teaching practices (Pearson & Moomaw, 2005; Reeve, Jang, Carrell, Jeon, & Barch, 2004; K. Shin, 2009). However, current global neo-liberal trends that signify an increasing emphasis on teacher accountability, as well as a centralization policy in the education sector, have curtailed the degree of autonomy that teachers can exercise over curricula. Indeed, many studies have criticized this trend as a threat that degrades teachers' professional identities (Leaton Gray, & Whitty, 2010; Philippou, Kontovourki, & Theodorou, 2013).

Although it is true that a number of countries have increasingly emphasized centralization policies for educational practices, decisions, and curricular change, other nations around the globe have instead adopted an education reform agenda that is characterized by decentralization, or the delegation of authority over educational decisions to local school districts, individual schools, or school personnel. Advocates for decentralization have argued that respecting local actors' professional discretion and delegating authority over educational decisions to these actors will better respond to the distinctive needs of individual schools by "increasing efficiency and effectiveness, empowering teachers and parents, enhancing community involvement [and] promoting democratic participation" (E. S. C. Ho, 2005, p. 48).

South Korea is one such country. The Korean education systems are highly centralized, and the nation's educational policies and, to date, teaching practices have principally been governed by the Ministry of Education (hearafter MOE) by means of a prescribed national curriculum. However, the need to diversify the curriculum and delegate authority to local districts of education and individual schools has been emerging and has increasingly been emphasized as a means to nurture students' ability to act as competitive citizens in the global era (Lee & Park, 2014; So, Kim, & Lee, 2012). Accordingly, a series of major national curriculum reforms, ranging from the sixth reform, which was released in 1992, to the second revised seventh reform, released in 2009, have increasingly expanded the extent to which teachers can exercise curricular autonomy (S. Lee, 2009).

Education in South Korea

Located in the center of East Asia between China and Japan, South Korea is a country with a history in excess of 5,000 years (So et al., 2012). In its modern history, the country has faced several challenges, including colonization by the Japanese and the Korean War, and was,

accordingly, divided into South (Republic of Korea) and North (Democratic People's Republic of Korea). The two countries now share the Korean Peninsula under an armistice agreement and South Korea occupies approximately 100,284 square kilometer of its total area of 223,405 square kilometer (Korean Culture Information Service, n.d.). South Korea (hereafter Korea) is a highly homogeneous society with 96% of its total approximate 50 million population (as of 2013) being ethnically Korean, although the number of foreign immigrants, primarily from the U.S., China, Vietnam, the Philippines, and several other Southeast and Central Asian countries, is constantly increasing (Korean Culture Information Service, n.d.). The major language used in Korea is Korean (Lee & Ramsey, 2000).

This section focuses on the education sector in Korea, in particular the role of education as perceived by the nation and its people in relation to its historical and cultural context. This will facilitate better understanding of Korean teachers' perceptions of curricular autonomy. In essence, Korea has six years of elementary school, three years of middle and high school respectively, and two years of college or four years of college or university (So et al., 2012). The educational policies and practices implemented in the school system have primarily been directed from the control tower, the MOE (So & Kang, 2014). Although the autonomy of local education authorities, such as district offices of education and individual local schools in each region, to operate schools has been increasing since the 1990s, it is still the MOE that plans and determines educational policies and national curricula and provides detailed guidelines on policy implementation for local education, leading to a series of educational and national curriculum reforms (Lee & Park, 2014; So & Kang, 2014).

This centralized control over education was conducive to rebuilding the country following its devastation from war, in addition to boosting its economy, and forming a Korean identity (G.

Kim, 2002; Lee & Park, 2014; So et al., 2012). Economically, South Korea has experienced rapid economic growth over the past five decades; while its per capita income was less than $100 in the early 1950s, as of 2013, its GDP had reached US$1,305 billion (Oh, 2010; Trading Economics, n.d.). Education has been acclaimed as the major driving force behind this success, and Korean education has been dubbed "industrial education" (So et al., 2012, p. 799) for the purpose of yielding the labor force required to develop its economy (G. Kim, 2002; Morris, 1996).

Put specifically, in the early 1960s when the military government was established by means of a coup, the Korean economy began to focus on the export industry, and with the development of the light manufacturing and consumer electronic goods industries, more workers were required (Dollar & Sokoloff, 1990). Accordingly, the primary purpose of education was to supply those industries with an educated labor force, and, accordingly, educational opportunities were extended to many children with an emphasis on practical education (G. Kim, 2002). Thus, at this time, the matriculation rate for elementary school children reached 96% (Korean Educational Development Institute, 2000). However, as the economy shifted its focus to heavy industries, such as shipbuilding and electronics (Dollar & Sokoloff, 1990), the education sector came to be more discipline-oriented and science, and technology education was more valued than other subjects (G. Kim, 2002).

From the 1990s to the present day, the strong bond between Korea's economy and education system has weakened considerably due to the increasing diversification of and rapid changes in society (G. Kim, 2002). The increased civic capacity of Koreans following the democratic movement of the late 1980s, and the emergence of a civilian government with the Kim Young Sam administration, have also contributed to reducing the strength of this bond (So et al., 2012). However, the national curriculum has continued to serve as an important tool to shape the

Korean identity that is required in the global era. Beginning from the 5.31 School Reform released in 1995, the following national curriculum reforms have increasingly highlighted autonomy and creativity as skillsets that Korean students need to develop as global citizens (So et al., 2012). Educational quality has also garnered more attention than quantitative expansion in the education sector, and discourses regarding a learner-centered curriculum that reflects students' individual differences have emerged and been emphasized (Lee & Park, 2014).

While perceptions of the role of education at the national level have changed dynamically in accordance with modifications to Korea's economic and political agenda, Korean perspectives on the same subject have remained relatively constant. The majority of Koreans view education as a channel through which to advance their social status, and this has ignited a strong zeal for education (J. Lee, 2006). This instrumental perspective on education is highly influenced by Confucianism, which is firmly entrenched in Korean society as its fundamental system of values and morals (So et al., 2012). Confucianism, which was initially adopted from China and transformed based on Korea's unique context and historical events, has deeply permeated the daily lives of Koreans as "a national belief system…central to Korean thought" (T. Kim, 2009, p. 858), serving as the dominant ideology in Korea (Sung & Tinkham, 2005).

T. Kim (2009) shed light on the meritocratic perspective on the value of education brought about by Confucianism as follows:

> In East Asian societies, education has been a forceful instrument of the ruling elite to govern the state. According to Confucius, it was through education that the ruler should "learn to care for the people", while the ruled "learn to be obedient" (Zhou, 1996, p. 242). The Confucian ideal was to put learning and meritocratic selection at the heart of governing elite culture. (p. 860)

Long ago, Korea adopted this Confucian perspective on education from China and adapted it to the Korean context. Since the Chosun Dynasty (1392-1910), Korea has operated an evaluation system for selecting civil servants; Although the form of this evaluation has changed over time, even today, those who obtain positions as civil servants are secure and respected:

> The meritocratic principle of Confucian civil service examination is still applied: that is, anyone who passes the civil service examination is to be appointed a public servant, and being a civil servant in Korea still means having power and security. (T. Kim, 2009, p. 860)

This meritocratic viewpoint was reinforced by the employment system, whereby people were hired for senior positions based on their school diplomas, particularly during the Japanese occupation era and the era of industrialization that followed, thus evolving into academic factionalism in the society at large (So & Kang, 2014). Due to the strong bond between education and social mobility, Korea is often cited as a country with an irrationally high education fever that has resulted in numerous social issues, ranging from extremely high educational expenses to low levels of student well-being (Lee & Shouse, 2011; Kim & Lee, 2010; Seth, 2002). In addition, this association has often been analyzed as one of the principal reasons why new educational reforms that have highlighted the egalitarian provision of opportunities to students from all social groups have failed to be implemented in school practices in the Korean context (Robinson, 1994).

Curricular Autonomy in National Curriculum Reform

South Korea has developed and released a total of seven national curricula since 1955 when the first national curriculum was released following liberation from Japanese occupation. Influenced by the emerging democratic movement and regionalization across government organizations, along with the establishment of the civilian government in the early 1990s, the MOE initiated a decentralization policy in the education sector (S. Lee, 2009; Min, 2008; S. Park, 2008).

Released in 1992 to address the needs of decentralization, the so-called sixth curriculum reform introduced the three tiers of national-, regional-, and school-level curricula. The scope and extent of delegation of authority over curriculum development to local actors have continued to expand gradually since then, and reached their high-water mark to date in the most recent revised seventh curriculum reform, which was released in 2009 (Hong, 2011).

To be specific, the sixth curriculum reform explicitly addressed the active role of individual schools in the development and implementation of the curriculum and stated that this would enable the flexible operation of diversified school curriculums that reflected regional differences. One of the noticeable characteristics of the sixth curriculum is that it promotes localization in the planning and operation of the curriculum for the subject titled "We are the first graders" (Lee & Hong, 2006). This is the first attempt by the MOE to grant authority to local educators in terms of the educational content to be taught at elementary school level (S. Lee, 2009). However, the sixth curriculum reform was criticized for its limited scope and the extent to which local actors could exercise their autonomy over the curriculum. For instance, in the sixth curriculum reform, individual schools and teachers were encouraged to adapt the national curriculum for the purpose of specifying the guidelines by adding instructional materials, and adjusting the order of teaching contents, but were not permitted to select the teaching content (S. Kim, 2010).

With the aim of promoting creative and autonomous future Koreans who can become 21st century leaders, the seventh curriculum reform was released in 1997. Being aligned with the aims and reflecting the criticisms of the sixth curriculum reform regarding the lack of autonomy permitted in developing diversified school-level curricula, the seventh curriculum greatly extended the areas over which local districts of education, individual schools, and teachers could exercise autonomy over the curriculum (S. Kim, 2010; S. Lee, 2009). Put specifically, the MOE promoted

practitioners to consider and reflect the distinctive characteristics of the region in which each school is located, the unique needs of students, teachers, and parents, and principals' philosophy of education in the development of school-level curricula (S. Kim, 2010). Lastly, the seventh curriculum explicated that individual schools and teachers are the major actors in developing school-level curricula (S. Kim, 2010).

To date, the seventh curriculum has been revised twice, in 2007 and 2009, in order to reflect changing social needs (S. Kim, 2010). For the initial 2007 revision, the curriculum reform granted more authority to local actors to exercise their autonomy by introducing "Discretional Activities" as a major component of the school curriculum and a differentiated curriculum based on individual students' levels of academic achievement. In the second revision in 2009, the MOE focused on students' struggles with the heavy learning content and their low level of academic interest, and emphasized the implementation of a learner-centered and flexible curriculum in practice. Put specifically, it changed the organization of the national curriculum in such a way that it now has two major components: ten subjects (Korean, moral education, social studies, mathematics, science, physical education, music, art, home economics, and English) and 'Creative Experience Activities'. These 'Creative Experience Activities' integrate extracurricular activities and discretional activities, which used to be separate sections of the national curriculum, for the purpose of allowing each school more flexibility to implement their own curricula (H. Park, 2012). The 'Creative Experience Activities' has four sub sections of autonomous, the club, the volunteer, and the career activities and holding weekly class meetings, participating in sports club, making efforts for environmental protections, and providing students with career exploration opportunities are the examples for each section (Hur, 2015).

Problem Statement

While Korean students have demonstrated high performance levels in international standardized assessments such as the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA) (Meisenberg & Woodley, 2013), many studies have noted that Korean students rank near the bottom in tests that measure students' confidence and enjoyment in studying math and science (Mullis, Martin, & Foy, 2008; S. Park, 2008). The rigid and standardized national curriculum that places heavy emphasis on content knowledge and does not take into account individual students' varied needs and interests has been identified as a major cause of this phenomenon (Ahn & Baek, 2013; H. Hong & Kim, 2008; S. Park, 2008; Seth, 2002; W. Hong & Youngs, 2014). For example, So and Kang (2014) note that Korean educators and researchers perceive the overly prescriptive and rigid nature of the national curriculum as limiting teachers' abilities "to develop, implement, and assess their own curriculum by adapting it to their classroom" (p. 798).

So and Kang (2014) additionally claimed that the education practices that constrain teachers' curricular development have resulted in low levels of happiness and interest in learning amongst Korean students, despite their high academic performance in comparison to their global counterparts. Likewise, Cho (2010) described the reasons why national curriculum reforms have particularly emphasized the expansion of teachers' curricular autonomy, citing the following: 1) to reflect individual students' various needs and interests; 2) to encourage students' creativity, one of the 21st century skills required for the global era; 3) to improve the relevance of the curriculum to each school and student; and 4) to enhance teachers' flexibility to build diversified curricula. However, despite the intentions of recent reforms, many Korean teachers across the nation still maintain a uniform curriculum and express discomfort regarding exercising greater curricular

autonomy. With regard to the reasons for this phenomenon, H. Park (2012) noted the rigid bureaucracy and strict regulations on implementing curricula, the too-heavy workloads assigned to teachers, the lack of democratic and local communication processes, and the lack of available resources to exercise curricular autonomy. W. Hong and Youngs (2014) add teachers' indifference to the curriculum policy changes and social norms in which schools are viewed solely as places that should aim to improve students' academic achievement to this list.

A wide array of literature—conducted mainly in a U.S. context—has criticized teachers' limited professional autonomy as influenced by global neo-liberal trends in educational policies (Leaton Gray, & Whitty, 2010; Philippou et al., 2013). This research has also highlighted teachers' requests for greater curricular autonomy. For instance, Grimmett, Fleming, and Trotter (2009) argue that current educational policies in the U.S. "de-professionalize teachers as servants of the state merely carrying out public policy" (p. 18). Likewise, Hargreaves (2003) enumerates the consequences of devaluing the professions as "tidal waves of resignation, early retirement, crises of recruitment, and shortages of eager and able educational leaders" (p. 11). By incorporating Lipsky's vision of teachers as street-level bureaucrats, Goldstein (2008) describes the struggles of four kindergarten teachers in the U.S. to make appropriate curricular and instructional decisions following the No Child Left Behind (NCLB) policy release, which increased centralized control in schools and decreased teachers' professional autonomy.

However, several studies have reported that teachers in different countries vary in their reactions to the external expansion of curricular autonomy through education reforms (Bjork, 2006; Philippou et al., 2013). W. Hong and Youngs (2014)'s article titled "Why are Teachers Afraid of Curricular Autonomy?" aptly demonstrates this contradiction. In investigating Korean secondary school teachers' perspectives and actual practices in terms of the enhanced autonomy mandated

by the reformed curriculum, W. Hong and Youngs (2014) found that secondary school teachers do not fully benefit from increased autonomy and even hold negative opinions regarding the effectiveness of the reform. Several other studies, meanwhile, have identified a misalignment between the policy's intention to ensure teacher autonomy and the teachers' exercise of autonomy in practice (Agudelo-Valderrama, 2006; Ozturk, 2012).

Although such studies recognize teachers' varied attitudes toward professional autonomy and the gap between intended policies and implemented practices, studies investigating the contributing factors that foster such reactions are rare in the Korean context. A small number of studies conducted in several other countries with highly centralized education systems and national curricula, such as Turkey, Indonesia, and Colombia, however, have pointed out that, in exercising or rejecting curricular autonomy, teachers are influenced by multiple factors rather than a single element; these factors range from their perceived self-efficacy at exercising autonomy to societal traditions (Agudelo-Valderrama, 2006; Usma Wilches, 2009). Therefore, it is worth examining to what extent teachers currently experience and desire curricular autonomy, in addition to how sociocultural and personal factors affect their current experiences and desire for curricular autonomy in the Korean context. Once these factors have been examined, it might be possible to elucidate why the reactions to curricular autonomy of teachers in different countries are so varied.

Purpose and Significance of the Study

Based on the aforementioned needs, this study aims to use a sociocultural lens through which to examine the interplay among sociocultural factors, Korean teachers' individual capacities and their perceptions of the current and desired degree of curricular autonomy that has been externally mandated by Korea's second revised seventh curriculum reform. To be specific, the purpose of this study is to identify structural relations among the two sociocultural factors of school

culture and Confucian values, Korean elementary school teachers' individual capacities including perceived self-efficacy and outcome expectancy in exercising curricular autonomy, and their perceived degree of current exercise and desire for curricular autonomy.

Many researchers have claimed that teachers' perceptions of curricula are largely reflected in the instructional process by affecting their instructional judgment (Terhart, 2003; Wilson, 1993). This research also argues that teachers are the key to curriculum reform success (Kirk & MacDonald, 2001; Spillane, 1999). Thus, better understanding of teachers' perceptions of their current and desired degrees of professional curricular autonomy, as well as what factors support or prevent teachers from achieving curricular autonomy goals, could help inform the MOE in Korea of the practical implications of successful reforms.

More specifically, this doctoral study will offer several contributions to the fields of curriculum studies, teacher education and elementary education. First, this study will advance the discourses that explore teachers' perceptions of curricular autonomy in countries with education systems and national curricula that have been historically centralized. Second, this study will contribute to the line of inquiry that discusses autonomy as a culturally variable term. Third, this study will enhance curriculum scholars' understandings of the influence of sociocultural factors on teachers' agency to exercise and desire curricular autonomy as imposed by curriculum reform policies. Fourth, this study will support policymakers' understanding of the conditions for and effective ways to promote teachers' exercise of curricular autonomy in alignment with the goals of policy change. Lastly, this study will contribute to the fields of teacher and elementary education by considering elementary school teachers as active change agents in the achievement of diversity and social justice in the increasingly diverse formal education setting.

Chapter 2: Literature Review

This chapter examines existing studies that discuss the concept of teacher autonomy in general, and curricular autonomy specifically, in order to identify gaps in the literature, establish clear research questions, and develop an appropriate research methodology to find solutions. This chapter is divided into seven main sections. The first part of the chapter elucidates how this study defines key concepts, while the second part introduces the theoretical perspectives that guided this study. The third section discusses the components and significance of teacher autonomy and examines alternative opinions that demonstrate contradictory findings for some of the variables discussed herein. The fourth section presents the importance of allowing teachers to have autonomy over curricula by demonstrating how teachers have reacted to being given greater curricular autonomy in countries that previously had centralized education systems: This section will also detail the personal and environmental factors that may be influential in supporting or hindering teachers' exercise of curricular autonomy.

The fifth section of this chapter will provide the findings from empirical studies that have investigated Korean teachers' attitudes toward and exercise of curricular autonomy. Section six will help readers to better understand the following: the nature of human and teacher agency; the factors that influence the achievement of agency in relation to externally mandated educational changes; the associations between school culture and Confucian values, which are examined as sociocultural factors; individual capacities such as self-efficacy and belief systems and professionalism; and agency achievement. Finally, the last section of the chapter will discuss the quantitative measurements and qualitative approaches that have been used most widely in examining teacher autonomy in order to inform the research methodology chosen for this study.

Defining Key Concepts

This section defines several key operational concepts as follows:

Curriculum. Curriculum is often recognized as a particular educational program or list of instructional materials, such as "lesson plans" or "syllabi" (Henson, 2003; Lattuca & Stark, 2009; McLaughlin, 2000; Toombs & Tierney, 1993). However, the concept of curriculum is more expansive than this common understanding suggests (Fraser & Bosanquet, 2006). In fact, scholarly discussion defines the term in various ways based on the authors' philosophies, epistemological perspectives, and experiences (Schubert, 1986; Squires, 2009). For example, Apple (1993) views the concept of curriculum as being culturally, politically, and socially value-laden rather than neutral.

Other scholars deconstruct the concept. Eisner (2002), for example, argues that schools teach three types of curriculum: explicit, implicit, and null. Explicit curricula are programs of study that are officially known to the public, while implicit curricula denote the unintended values or experiences that are obtained by students; null curricula, meanwhile, involve knowledge being intentionally excluded or marginalized in the content or process of teaching (Flinders, Noddings, & Thornton, 1986). Likewise, Goodlad, Klein, and Tye (1979) categorize curricula into intended, implemented, and attained. Intended curricula, such as standards-based curricula, are developed at the government level; implemented curricula are interpreted and carried out by teachers, and attained curricula are what students actually learn from the implemented curricula. This study adopts the curriculum categorization of Goodlad et al. (1979) and focuses on implemented curricula. Put specifically, curriculum, in this study, refers to any teachers' activities that are related to the interpretation of national curriculum guides or resources, the design of students' learning experiences, the teaching implementation process, and the assessment of the curriculum.

Teacher autonomy. The term autonomy has been defined in various ways across disciplines, and there is no consensus on its definition (Rudolph, 2006). Pearson and Moomaw (2005) even suggest that the term is too ambiguous for elucidation because its meaning is continuously evolving. For example, if the term is defined as employee freedom, the types and levels of this freedom might not be understood identically among all those who use it, thus creating confusion. The term can also be communicated differently across cultures. As Littlewood (1999) argues, autonomy is not a "culture-free" term (p. 73). He notes that the concept of autonomy as used by teachers in Western countries might not be precisely fitted to the purpose of teachers employing the term in Eastern sociocultural contexts. To be specific, in Eastern countries under the umbrella of Confucian culture, collectivism and interdependence are emphasized in the understanding of the term "autonomy," while independence and isolation are assumed in Western countries.

Strong and Yoshida (2014) summarize four commonly cited constructs among educational scholars who employ the term from teachers' perspectives:

> The first is teacher autonomy's areas of operation. LaCoe (2006), O'Hara (2006), and Rudolph (2006) categorized the areas in which teachers may exercise autonomy into six distinct aspects of curriculum, pedagogy, assessment, student behavior, classroom environment, and professional development… Second, autonomy in decision-making allows teachers choice and determination in the critical issues surrounding their duties (Pearson 1995; Sentovich 2004)… Third, Brunetti (2001) claimed that autonomy is freedom from demands or pressure from other teachers or administrators… Fourth, autonomy is associated with control in the sense of latitude to do work (Ingersoll 1994, 1996; LaCoe 2006; Rudolph 2006). (p. 124)

As the summary elucidates, the definitions of teacher autonomy that are employed by many scholars remain broad and indistinct compared to other related terms. In fact, the term autonomy is often used interchangeably with the concept of teacher empowerment (Usma Wilches, 2009). The emphasis on teachers' participation in school-wide decision-making processes illustrated in Strong and Yoshida's (2014) summary above is consistent with Short's (1994) description of teacher empowerment in his research titled Defining Teacher Empowerment.

By recognizing this issue, and after conducting a comprehensive review of studies on teacher autonomy, Usma Wilches (2009) defines teacher autonomy as "the perceived and actual capacity to exercise control over teaching and assessment, curriculum development, school functioning, or professional development matters, within the limits of the educational goals accepted by the school community" (p. 269). The word 'control' here, denotes teachers' ability to "exert influence over those things that affect one's life in order to obtain or prevent determined results" (Usma Wilches, 2009, p. 269).

This definition is suitable for this study not only because of its specificity with regard to teacher autonomy, but also its acknowledgement of the borders that teachers can construct or perceive in exercising their autonomy. Historically, Korea has a highly centralized education system with an emphasis on a standardized national curriculum. Although there have been several attempts in Korea to grant teachers greater autonomy through curriculum reform, teachers are still required to adhere to fundamental national curriculum guidelines set by the educational authority, the MOE. To clarify her definition of teacher autonomy, Usma Wilches (2009) states that the concept of autonomy entails interdependence and "the responsible exercise of discretion within the limits of school stakeholders' interest and needs" instead of independence and freedom from constraints (p. 270). She adds that the construct of teacher autonomy should account for multiple

perspectives with regard to such subjects as teachers' perceived confidence and environmental factors.

Teachers' curricular autonomy. Teachers' curricular autonomy has been explained as one of the areas in which teachers can exercise professional autonomy. For instance, Pearson and Moomaw (2005) have divided the concept into general and curricular autonomy and describe the latter in relation to teachers' discretion regarding what and how to teach. To define the concept, this study adopts Usma Wilches' (2009) description of teacher curricular autonomy as "professional autonomy in order to interpret, construct, and implement the curriculum" (p. 251).

This definition includes 'interpreting' and 'implementing' as domains in which teachers can exercise their autonomy over curricula; this is in contrast to Pearson and Moomaw's (2005) definition, which restricts the concept to the planning process. However, this study adds the phase of 'assessing the curriculum that has been implemented' to Usma Wilches' (2009) definition of teacher curricular autonomy, as such assessment is aligned with the processes of interpreting, constructing, and implementing the curriculum. Therefore, in this study, teacher curricular autonomy refers to teachers' professional autonomy in order to interpret, construct, implement, and evaluate the curriculum.

Teacher agency to exercise curricular autonomy. Alexander (1987) describes human agency as "the power to make a difference to the state of affairs" (cited in Datnow, 2012, p. 194). By recognizing teachers as agents who actively engage and passively accept or reject changes in educational policy, this study adopts Wertsch, Tulviste, and Hagstrom (1993) sociocultural approach to defining the concept of teacher agency. According to Wertsch et al. (1993):

> …the individual(s) involved certainly continues to bear the major responsibility for initiating and carrying out an action, but the possibilities for formulating certain problems,

> let alone the possibilities for following certain paths of action are shaped by the mediational means employed. (p. 342)

From this perspective, in this study, teacher agency to exercise curricular autonomy refers to the extent to which individual teachers currently exercise or desire to exercise curricular autonomy, as shaped by the sociocultural influences in which they are situated. Teachers' acts are also shaped by "mediational means" (Wertsch et al., 1993, p. 342) that reflect the "cultural, historical, and social structure" of the environments in which they work (Lasky, 2005, p. 900).

Teachers' perceptions of individual capacity. Teachers' perceptions have been examined extensively in relation to their instructional decisions and implementation (Applefield, Huber, & Moallem, 2000; Jaramillo, 1996). When teachers are expected to interpret and implement changes in their classrooms, the success of curriculum reform is highly influenced by how teachers perceive their curricular autonomy (Sternberg & Williams, 2002). With regard to teachers' individual capacities, Lasky (2005) explains:

> Individual capacity is what an individual brings with him or her to the school setting and instruction. It includes personal commitment, a willingness to learn about instruction and to view learning as on-going, and substantive knowledge about reform ideas (Spillane & Thompson, 1997). It also encompasses individual beliefs, identity, values, subject area and pedagogic knowledge, past experiences with reform (Stoll, 1999), teacher emotional well-being (Hargreaves, 1998), and professional vulnerability (Lasky, 2004). (p. 901)

In this study, teachers' perceptions of individual capacity refers to Korean elementary school teachers' perceived self-efficacy and outcome expectancy in exercising autonomy over the curriculum. Perceived self-efficacy in exercising curricular autonomy. By adopting Bandura's (1997) definition of self-efficacy, this study views teachers' perceived self-efficacy as the teachers'

perception of their ability to perform certain actions at a desired level. Therefore, in this study, the term self-efficacy in exercise curricular autonomy refers to Korean elementary teachers' perception on their ability to exercise autonomy over the curriculum throughout the phases of curriculum planning, implementation, and evaluation.

In addition, Bandura (1977) described outcome expectancy as "a person's estimate that a given behavior will lead to certain outcomes" (p. 193). Outcome expectancy is differentiated from self-efficacy in the sense that its concern is for the consequences that one's action will bring, while the latter focuses on one's ability to execute the action (Bandura, 1993). In this study, perceived outcome expectancy in exercising curricular autonomy refers to Korean elementary school teachers' perceptions that exercising their autonomy over the curriculum will have positive consequences for both their own professional development with regard to the exercise of curricular autonomy and students' academic improvement.

School culture. Every school has its own unique culture, which is constructed to some degree by its members, ranging from teachers to parents, and reflecting the "norms, values, beliefs, ceremonies, rituals, traditions, and myths understood" (Stolp, 1994, p. 1). In this study, school culture refers to the unique atmosphere fostered by individual teachers' relationships with the school principal, co-workers, and students in a given school.

Confucian values. While many scholars have attempted to identify the characteristics of Confucian values, including but not limited to authoritarianism, formalism, collectivism, and generalism, and their effects on organizational practice and systems in a South Korea context, no consensus has been reached (K. Kim, 1981; C. Park, 2008). In this study, collectivism and authoritarianism are particularly examined insofar as they are Confucian values. According to Littlewood (1999)'s descriptions, this study defines collectivism as the "orientation that

encourages individuals to see themselves as an inseparable part of the in-group; they expect and are expected to accord first priority to the views, needs and goals of the group rather than 'stand out' as an individual" (p. 79). In addition, this study denotes authoritarianism as the orientation that encourages individuals to "accept differences in power and authority" (Littlewood, 1999, p. 81) and uncritically subject themselves to authority (Duriez, Van Hiel, & Kossowska, 2005).

Theoretical Perspectives on Teacher Autonomy

The notion of autonomy has been investigated by many scholars across disciplines in various ways, one of which is in relation to human psychological well-being or work performance in job settings. Accordingly, numerous theories have addressed the concept of autonomy in an implicit as well as an explicit manner. This section discusses the theoretical perspective that the author judged to be most relevant to the present study and conducive to facilitating readers' understandings of Korean elementary school teachers' perceptions of their current and desired curricular autonomy, as well as the sociocultural and personal factors that contribute to these perceptions.

First, the sociocultural approach to agency adopted by Wertsch and colleagues (1993) illuminates the leading role that sociocultural factors play in shaping human agency. According to Wertsch et al. (1993), human agency to carry out an action is "socially distributed or shared," and mediational means play a crucial role in facilitating it (p. 352). This view contrasts with that of psychologists, particularly those in Western countries, who link the concept of agency to individualistic traditions and regard it as a physically and psychologically isolated property, calling it "atomistic agency" (p. 340). In other words, the cognitive processes that determine an individual's actions are highly influenced by the collective cognition formed in certain groups of which the individual is a part.

The locus of this sociocultural approach to agency can be found in Vygotsky's concepts of intramental and intermental functioning, which, in his general genetic law of cultural development, constitute an individual's cognitive processes (Wertsch et al., 1993). By correlating intramental functioning with the psychological or individual dimension of a child's development, and intermental functioning with the social or collective dimension, Vygotsky (1979) underscores the primary role played by aspects of intramental functioning in an individual's mental processes; in other words, "the social dimension of consciousness is primary in time and in fact. The individual dimension of consciousness is derivative and secondary" (p. 30). Based on this claim, Wertsch et al. (1993) argue that analyzing and examining "socially shared cognition" should precede understanding of individuals' psychologconduitcal development (p. 340).

The notion of mediation proposed by Vygotsky (1979) also reinforces this point by elucidating the relationship between agency and mediational means. First, the concept of mediation has been described from several different viewpoints, defined as "the process through which the social and the individual mutually shape each other" (Daniels, 2015, p. 34) or "the process of equipping children with mental tools, the instruments they will need for mediating their mental processes" (Karpov, 2003, p. 46). However, adopting a sociocultural approach to agency, Wertsch et al. (1993) particularly stress that, for Vygotsky, mediational means to actively transform the "entire flow and structure of mental functions" (as cited on p. 341) in human agency; thus, mediational means are inseparable from the agency that employs them. As Wertsch et al. (1993) explain:

> One of the clearest ways to recognize the importance of mediation is to consider an interesting modern addition to Vygotsky's list of mediational means – the computer…Even simple applications of computers such as the use of word processing and spreadsheet

> programs typically result in reports of how one's thinking, writing, and problem solving change…the individual(s) involved certainly continues to bear the major responsibility for initiating and carrying out an action, but the possibilities for formulating certain problems, let alone the possibilities for following certain paths of action are shaped by the meditational means employed [computer]. The resulting picture is one in which the irreducible unit of analysis for agency is "individual(s)-operating with mediational-means". (p. 342)

By renaming the hyphenated term as "mediated agency" (p. 342) and defining it as "an irreducible tension between an individual or individuals (i.e., intramental or intermental functioning) on the one hand and mediational means on the other," Wertsch and colleagues (1993) argue that mediational means are culturally, historically, and institutionally situated in nature (p. 342). Human mental functioning that is rooted in mediated agency, therefore, is also situated in a "sociocultural milieu" (Wertsch et al., 1993, p. 344). From this perspective, the sociocultural approach to agency implicates that this study needs to shed light on the sociocultural factors that are situated in Korean elementary school teachers' perceptions regarding their exercise of curricular autonomy.

Second, Bandura's (1986) social cognitive theory also contributes to this study. In this theory, he suggests a triadic and reciprocal viewpoint on understanding the nature of agency by describing agency as a person's intentional acts and core of "self-development, adaptation, and self-renewal" (Bandura, 2001, p. 2). To be specific, Bandura's social cognitive theory illuminates triadic and reciprocal relationships among personal factors (beliefs, efficacy, aspirations, and outcome expectations), environmental factors (sociocultural circumstances), and behavioral patterns (Bandura, 1986; 1999; 2011). By defining the term 'reciprocal' as "the mutual action

between causal factors," this theory underlines the interactions between behavior and personal and environmental determinants, arguing that all three influence and shape one another (Bandura, 1986, pp. 23-24). According to Bandura (1986), action and reaction result in a continuously dynamic interplay among the three factors, while their reciprocal influences do not necessarily need to be equal and simultaneous with regard to their strengths and timing. This study therefore focuses on the role of personal and environmental factors in individual behavior.

Although, like Wertsch et al. (1993), this theory acknowledges the impossibility of detaching human agency from its affiliated social structures, it points out that agency does not occupy a passive position whereby it merely receives influences:

> The self-system is not merely a conduit for sociostructural influences. Although the self is socially constituted, by exercising self-influence human agents operate generatively and proactively, not just reactively, to shape the character of their social systems. In these agentic transactions, people are producers as well as products of social systems. Personal agency and social structure operate interdependently. Social structures are created by human activity, and sociostructural practices, in turn, impose constraints and provide enabling resources and opportunity structures for personal development and functioning. (Bandura, 2001, p. 15)

Zooming in on the scholar's investigations in relation to the three elements of a triadic and reciprocal relationship, it is worth noting that teachers' skills, knowledge, attitudes, anxiety, self-efficacy, time commitment, personal risk, competence, and perceived relevance, among others, constitute personal factors in the field of education. As one of these personal factors, much attention has been paid to self-efficacy by education scholars—including Bandura himself—with regard to teachers' psychological and cognitive processes and actions.

For example, self-efficacy has been examined in relation to teachers' levels of burn-out, stress, job satisfaction, commitment to teaching, and retention rates (Klassen & Chiu, 2010; Schwarzer & Hallum, 2008); teacher and student relationships and students' academic performance (Caprara, Barbaranelli, Steca, & Malone, 2006; Guo, Connor, Yang, Roehrig, & Morrison, 2012); and success in and challenges to educational reform or innovations (Donnell & Gettinger, 2015). Teachers' self-efficacy has also been highlighted in relation to several environmental factors in the field of education. For instance, sense of community within the school environment (V. E. Lee, Dedrick, & Smith, 1991), principals' leadership (McCoach & Colbert, 2010), and healthy school climate (Hoy & Woolfolk, 1993) were tested and validated as factors that help improve teachers' self-efficacy, while high workload and demand (Bakker & Demerouti, 2007) as well as insufficient resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) were marked as factors that reduce teachers' self-efficacy.

In summary, Wertsch et al.'s (1993) sociocultural approach to agency and Bandura's (1986) social cognitive theory provide theoretical underpinnings to explore the effects of sociocultural and personal factors on Korean elementary school teachers' exercise of current and desired levels of curricular autonomy. These two theoretical frameworks illuminate that human cognitive functioning is such that direct human actions are shaped by socially and culturally mediated means. Grounded in these perspectives, this study assumes that Korean elementary school teachers' individual capacities, self-efficacy, and outcome expectancy in exercising curricular autonomy, might be shaped by the sociocultural factors of the society in which they live.

Research on Teacher Autonomy

Teacher autonomy has long been a topic of interest within the field of education and many scholars have considered its contribution to education quality (Usma Wilches, 2009). Teachers'

professional decisions, when supported by autonomy, have been shown to have various positive effects. This section discusses the assertions made in existing studies regarding the components and importance of teacher autonomy; it will also cite a number of studies that have expressed other opinions on the concept.

Components of teacher autonomy. To conceptualize teacher autonomy, Friedman (1999) asked 52 elementary school teachers and principals in Israel to list the required components of teachers' work in a specific manner, along with the level of desired autonomy for each component. By analyzing this qualitative data using a content analysis technique, Friedman (1999) identified teachers' major work activities and developed a survey instrument based on the findings. The instrument was then administered to 162 randomly selected elementary school teachers and a facet theory was used that employed smallest space analysis (SSA) to understand the results. Friedman (1999) found that teachers' perceived autonomy is composed of two types of decisions: pedagogical and organizational. He focused on the organizational function of teachers' work, since existing studies emphasize this aspect less commonly than the pedagogical function.

In addition, Friedman (1999) pointed out that the above two dimensions were found to be related either to principle decisions that fundamentally influence teachers' work or to routine decisions that do not affect their basic work activities. In summary, Friedman's (1999) conceptualization of teacher autonomy consists of four elements: pedagogical and organizational autonomy and decisions for principle and routine works. Friedman's (1999) conceptualization of teacher autonomy was revalidated by Pearson and Moomaw (2005) in a study involving teachers from elementary, middle, and high schools in Florida. In their Teaching Autonomy Scale (TAS), Pearson and Moomaw (2005) used the results from a factor analysis to divide teacher autonomy into two sub-constructs: general autonomy and curriculum autonomy. General autonomy

corresponds to Friedman's (1999) organizational facet, as it concerns the items that measure classroom standards of conduct and personal, on-the-job decision-making. Curriculum autonomy corresponds to the pedagogical function facet, as it represents the selection of activities and materials as well as instructional planning and sequencing.

While Friedman (1999) and Pearson and Moomaw (2005) describe the two components of teacher autonomy as separate, Wermke and Höstfält (2013) shed light on their systematic relationship. To be specific, they suggest a two-dimensional model that contextualizes teacher autonomy in relation to services and institutions. The model comprises an x-axis of institutional autonomy and a y-axis of service autonomy, with two end points based on the degree of extension and restriction of autonomy. In understanding teacher autonomy, they highlight the tensions that teachers encounter between their professional work, which requires discretionary decisions in the classroom (services), and their dependent status as employees at schools that are also governed by higher organizational structures such as states (institutions). As a result, these authors define teacher autonomy as "the scope of action teachers have to react to" (p. 60). Their suggested model has four dimensions, representing four different forms of governance that are influenced by curriculum evaluation types; institutional, service, extended, and restricted autonomy. For example, they explain that institutional autonomy is restricted while service autonomy is extended in contexts with a product-related curriculum evaluation, whereas the former is extended and the latter restricted in contexts with a process-related curriculum evaluation.

Although it focuses on learner autonomy rather than teacher autonomy, Littlewood's (1999) study is also worth reviewing, as it contextualizes learner autonomy in regards to culture, providing a more comprehensive and broader understanding of the subject. Raising the issue of "limited transferability" for definitions of autonomy originating from Western countries in Eastern contexts,

Littlewood (1999) argues that forms of autonomy can vary in different contexts (p. 72). For this reason, he maintains the importance of understanding which type of autonomy benefits students in specific cultural contexts.

More specifically, proactive autonomy refers to a form of autonomy that has been implicitly and widely touted by scholars when discussing the concept, without considering intercultural variations. Proactive autonomy is often associated with words such as "independence, self-fulfillment, [and] freedom from external constraints" (Littlewood, 1999, p. 72). In other words, learners with proactive autonomy regulate all of their actions, ranging from setting learning objectives to designing activities, in order to achieve their objectives independently. On the other hand, reactive autonomy refers to a restricted autonomy in which learners self-regulate. For example, learners with reactive autonomy adopt their own approaches to reaching the goals set by teachers. Littlewood (1999) hypothesizes that reactive autonomy is a more appropriate term for communicating autonomy in Eastern countries due to cultural factors. These will be discussed in detail in the section that reviews factors that influence teachers' curricular autonomy.

The importance of teacher autonomy. Many studies have shed light on the significance of ensuring teacher autonomy in relation to multiple facets of teachers' experiences, ranging from job satisfaction to students' academic performance. Pearson and Moomaw (2005) provide empirical evidence of the associations between teacher autonomy, on-the-job stress, work satisfaction, empowerment, and professionalism by using their Teaching Autonomy Scale (TAS) to measure general and curricular autonomy. All of the above are elements of a teacher's life that have often been treated as highly associated constructs in other fields that are concerned with employee effectiveness. The findings of the above authors indicate that perceived levels of general autonomy are positively correlated with perceived levels of empowerment and professionalism

among teachers, while curricular autonomy is only associated with a decrease in teachers' perceived levels of on-the-job stress. However, Pearson and Moomaw (2005) report that, unlike many previous studies, they did not find strong or direct associations between job satisfaction and either general or curricular autonomy.

Although it is undeniable that job satisfaction is a crucial element for any worker regardless of profession, in the study conducted by Struman et al. (2005), more than four-fifths of nationally representative 4184 teachers across school levels in England reported that the most rewarding element of their jobs was the satisfaction of helping children both academically and personally. From this perspective, it is worth examining more studies that highlight the relationship between teacher autonomy and job satisfaction. Indeed, several studies have reported positive relationships between these factors, although Pearson and Moomaw (2005) claim a weak association.

Approximately 30 years ago, Kreis and Brockopp (1986) investigated the relationship between teachers' perceived degrees of autonomy and their levels of job satisfaction in a sample of 34 parochial teachers and 26 public school teachers across grade levels in western New York cities in U.S. Using the Perceived Autonomy Scale developed by the authors and the Job Satisfaction Index released by Brayfield and Rothe (cited in Kreis & Brockopp, 1986, p. 111), the authors concluded that teachers' perceived sense of autonomy contributes to their job satisfaction. However, they noted that autonomy within the classroom environment plays a greater role in improving job satisfaction than school-wide autonomy.

However, insofar as autonomy in the classroom corresponds with curricular autonomy as conceived by Pearson and Moomaw (2005), which was, in turn, based on the definition offered by Kreis and Brockopp (1986), these two studies indicate contradictory results regarding the relationship between job satisfaction and teacher autonomy in instructional practices. Examining

more recent research, Bogler and Nir (2012) treat teacher autonomy as one component of their perceived organizational support and relate it to job satisfaction. The authors divided this latter concept into two aspects, job fulfillment and job comfort, and, using a sample of 2,565 elementary school teachers in Israel, conducted a path analysis and found a positive relationship between the two constructs. In other words, as teachers perceive themselves to have more autonomy, their level of job satisfaction increases.

The findings of Collie, Shapka, and Perry (2012) are similar to those of Bogler and Nir (2012). In viewing teacher autonomy as a teacher's ability to participate in decision-making processes, Collie et al. (2012) also demonstrate the positive effects of autonomy-supportive school climates for teachers when it comes to job satisfaction. With data collected from 664 elementary and secondary school teachers in Canada through online survey research, these authors conducted a structural equation modeling analysis to examine whether teachers' perceived school climates and social and emotional learning skills predict their levels of stress, job satisfaction, and teaching efficacy. The results indicated an indirect but powerful relationship between teachers' perceived autonomy and their job satisfaction. As teachers perceived more autonomy in their school climates, they were less likely to be stressed, which, in turn, enhanced their job satisfaction. This discrepancy among the research examining the relationship between teacher autonomy and job satisfaction confirms that a general consensus on the topic has yet to be reached.

Given that approximately 30% of teachers decide to leave the profession within five years of beginning their teaching careers, it is worth reviewing studies that illuminate the critical role that ensuring teacher autonomy might play in reducing teacher attrition rates (Smithers & Robinson, 2003). Acknowledging that high teacher attrition rates cause difficulties in school staffing and consequently have negative effects on students' academic performance, Luekens,

Lyter, and Fox (2004) investigated the reasons why teachers move to other schools or leave the profession altogether. They used data collected from the Teacher Follow-up Survey in the School and Staffing Survey (SASS) from the National Center for Education Statistics (NCES) that was administered to teachers at both public and private schools across the school levels throughout U.S. during the 1999-2000 and 2000-2001 school years. Approximately 8,400 teachers participated in this survey, and one of the findings indicated that a lack of influence over school-wide policies and control over their classrooms motivated teachers to switch or leave schools.

Similarly, Torres (2014) recognized the issue of the reduced autonomy of teachers who work in charter schools managed by Charter Management Organizations (CMOs) and investigated how this reduced autonomy affects job satisfaction and teachers' decisions to find employment elsewhere. He interviewed 20 teachers who recently left their teaching positions at New York Charter schools in U.S., including elementary, middle, and high school levels. His findings support the claim of Luekens et al. (2004) that there is a positive correlation between reduced teacher autonomy and increased turnover rate, reporting that, through their centralized and prescriptive system, charter schools under CMOs discourage teachers who want to be "architects" instead of "construction workers" (p. 9). In other words, this refers to those who might want a say in decision-making processes regarding school policies and educational programs for students. Borman and Dowling (2008) also report, in a meta-analysis of 34 studies addressing teacher attrition moderators, that administrative support for ensuring teacher autonomy helps to reduce the rate of teacher attrition.

Teacher autonomy has also been identified in existing studies as one of the relevant factors that affect students' academic achievement. In such study, E. S. C. Ho (2005) provides useful evidence on the positive effects of ensuring teacher autonomy on students' academic performance.

This author examined whether the constructs of school autonomy and teacher participation contributed, when advocated by principals and teachers, to the mathematics performances of 15-year-old Hong Kong students who participated in the 2003 PISA test. He found that teacher participation across five decision areas, ranging from student affairs to curriculum and instruction, demonstrated statistically significant associations with students' mathematics performance, controlling for students' levels of background information; however, school autonomy did not affect the students' mathematics performances. With this result, E. S. C. Ho (2005) implies that teacher-driven decentralization with greater autonomy might be more effective in improving academic achievement than the school-driven implementation of educational reforms that highlight a decentralization policy.

Other opinions on the effects of teacher autonomy. Another strain of the literature offers a different point of view regarding the effects of teacher autonomy on the variables discussed in the previous section. Archbald and Porter (1994) distinguish between districts with high and low levels of control based on the general absence of district-wide course, textbook, and testing policies. They also assume that teachers in low-level districts have more autonomy. They compare teachers' beliefs and attitudes regarding professional autonomy and self-efficacy in districts with varied levels of curriculum policy centralization and find that there is an indirect and ambiguous association between teacher autonomy, self-efficacy, and job satisfaction (Archbald & Porter, 1994).

The findings of Archbald and Porter (1994) are consistent with a more recent publication by Song, Martens, McCharen, and Ausburn (2011). Song et al. (2011) tested the structural relationships between supportive learning cultures, job autonomy, school innovation climates, and teachers' perceived turnover intentions among 320 teachers who participated in career and

technical education programs at the Oklahoma State University in U.S. Majority of teachers in the study had bachelor or master degree and worked at technology centers, middle schools and high schools in Okalahoma, U.S. Unlike a number of studies across disciplines that highlight the positive relationship between employees' sense of job autonomy and job retention rates, this study did not confirm any statistically direct associations between the two constructs.

On a related note, Pearson and Hall (1993) argue for a conditional relationship between teacher autonomy and teachers' work-related variables. For example, they contend that teacher autonomy is more important for experienced teachers than for novice teachers, as the latter concern themselves primarily with survival issues. More experienced teachers, however, having more self-confidence, emphasize long-range planning and providing for varied student needs. This implies that enhanced teacher autonomy may be effective only for experienced teachers.

This finding is echoed by Torres (2014), who interviewed 20 New York City charter school teachers who were working at elementary, middle, and high school levels and examined whether teachers at CMO-affiliated charter schools and those at non-CMO schools similarly or differently recognized limited autonomy as a contributing factor in their decisions to seek new employment. By comparing data from 13 CMO teachers and seven non-CMO teachers, Torres found that reduced autonomy over school-wide decisions motivated CMO teachers to leave their positions, while non-CMO teachers, particularly new teachers, were not as bothered by reduced autonomy as by a lack of direction and support in several areas of their work, ranging from classroom instruction to student discipline.

To summarize, the literature reviewed regarding the components of teacher autonomy, the importance of teacher autonomy, and contrasting opinions on the effects of teacher autonomy indicates that teacher autonomy has primarily been explored in two threads: via autonomy in

instructional practices and via teachers' positions as employees. Many scholars have advocated that the two types of autonomy increase teachers' perceived job satisfaction, professionalism, and empowerment, as well as students' academic achievement, while simultaneously decreasing job stress and teacher attrition rates; however, a small number of studies have presented contradictory results for some of the same variables, such as job retention and satisfaction. Therefore, the causes of these differences need to be examined further. It is also worth testing the associations between teacher autonomy and the same variables with larger samples and in different social and cultural contexts in order to generalize the findings.

Research on Teacher Curricular Autonomy

This section narrows downs the topic of teacher autonomy to curricular autonomy. A number of articles explicitly and implicitly provide insights into the positive effects of teachers' curricular autonomy on students' learning processes, offering a rationale for considering the conditions or factors that maximize or reduce the benefits of teachers' curricular autonomy. However, the degree to which teachers exercise this autonomy is varied, as are their attitudes towards enhanced or limited curricular autonomy; to a large extent, these factors depend on the contexts in which teachers are situated.

In this section, first, the significance of teachers' curricular autonomy as discussed in existing studies will be reviewed, shedding light on the relationship between teachers' curricular autonomy and the success of curriculum reform policy, students' learning experiences, and teachers' job retention rates. Next, teachers' experiences with curricular autonomy in countries with highly centralized education systems that have begun to decentralize will be reviewed to better understand teachers' experiences in Korea. Lastly, the personal and environmental factors that contribute to teachers' perceptions and experiences of curricular autonomy will be examined

in order to identify any constructs that can be investigated in terms of Korean elementary school teachers.

The significance of teachers' curricular autonomy. One major strain of the literature focusing on teachers' curricular autonomy highlights its significance. First, several existing studies have shed light on its importance in relation to the crucial role that teachers play as the implementers of curricula in classrooms. In one of the most significant contributions to studies of teacher autonomy, Pearson and Hall (1993) criticize practices whereby teachers cannot directly participate in developing instructional materials for their students. These authors expound on the need to grant teachers curricular autonomy, saying that, "Decisions about materials to be taught are often made by distant, impersonal, and legal rational sources such as tests, standards, textbook adoptions, curriculum guidelines, and expert opinion" (Pearson & Hall, 1993, p. 173). This point is supported by Simons (1998):

> As active agents in the mediation of knowledge, teachers are closer to understanding the formal and informal curriculum experience of all students and how to access it. Many of the creative opportunities for learning take place in unexpected ways and at unexpected times, teachers and students are often in a better position than external evaluators to document and evaluate the rich experiences of learning…They 'know' the students in a concrete, personal, individualized way. (p. 368)

The absence of teacher participation in the development of instructional resources, including curricula, is one of the main problems with formal curricula that are dictated by "goals and activities outlined by school policies or designed in textbooks" (Remillard, 2005, p. 213). Teachers in such systems are rarely working in line with the curricula advocated by educational authorities; rather, they interpret the curriculum and transform it in their classrooms (Apple, 2014).

Indeed, there is an important difference in such systems between intended and enacted curricula, which Pearson and Hall (1993) denote as teachers' objectives versus what students actually learn. Remillard (2005) points out this misalignment among formal, intended, and enacted curricula as a factor that negatively affects the effectiveness of curriculum reform.

Remillard (2005) calls for teachers' active participation in curriculum development and implementation by underscoring the importance of granting curricular autonomy to teachers. To align the three types of curriculum, he suggests a framework for cultivating a desirable relationship between teachers and curricula in the interest of improving the quality of students' learning experiences. Highlighting how teachers' active participation is supported by curricular autonomy, Remillard (2005) advocates for a participatory relationship between teachers and curricula; in this framework, teachers would incorporate their "resources, stances, and perspectives to the participatory relationship with the curriculum, while the curriculum can be an active participant in this relationship because it is made based on sociocultural perspectives" (p. 238).

In fact, several studies have demonstrated a direct association between teachers' exercise of curricular autonomy and students' learning experiences and outcomes. For instance, K. Shin (2009) elucidates how teachers' exercise of curricular autonomy improves students' critical thinking skills through interview research with eight high school history teachers in Spring County of the Midwestern state of U.S. According to K. Shin (2009), one male teacher at Franklin High School preferred to select politically debatable topics as content for his discussion-oriented history class instead of following the history textbook provided by the district. The following quotation on the China-Tibet relationship demonstrates how he exercised his curricular autonomy to enhance students' critical thinking capabilities:

I would sometimes play devil's advocate, because instinct on the Tibet and China thing is

> to decide what Tibet is. I would sometimes even say, "Look. Let's look at the other side. I will make the argument for the other side of the issue. How they justify what they are doing. One of the notions of conflict resolution is you can't resolve the conflict. That is continuing conflict. At least you understand the position of the other side. Not necessarily agree with it but understand it." That is what I try to do. (p. 203)

As implied in this example, teachers' curricular autonomy plays a significant role in actively involving students in the learning process.

Furthermore, in Reeve et al. (2004), enhanced teacher curricular autonomy is shown to increase student engagement in learning activities. Specifically, Reeve and colleagues (2004) observed how teachers exercised their curricular autonomy while working with 20 high school teachers for a 10-week period in the Midwest of U.S. They found that teachers who creatively applied the autonomy-support approach increased their students' engagement; to do so, they worked to identify students' needs, preferences, and interests as well as to create student advancement opportunities by altering the learning environment and processes. This finding represents the significance of teachers developing customized curricula to increase students' intrinsic learning motivation.

Regarding the contribution of teachers' curricular exercise to students' academic outcomes, Machin and Vernoit (2011) report that students who study in academy schools—an emerging model of autonomous school in England that constructs its own school structures and grants teachers greater curricular and assessment autonomy—have demonstrated better academic performance in English and math than their counterparts in traditional schools. There is also a large body of literature that illuminates the indirect associations between teachers' curricular autonomy and students' learning experiences that lead to improved academic performance.

One subset of this literature highlights teachers' curricular autonomy as a requirement for supporting student autonomy. For example, Assor, Kaplan, and Roth (2002) investigate autonomic features emanating from teachers that either enhance or suppress their students' engagement in schoolwork with students at both elementary and middle school levels in Israel. They define these features as autonomy-enhancing and autonomy-suppressing behaviors. While the autonomy-enhancing behaviors foster relevance, provide choices, and allow for criticism, the autonomy-suppressing behaviors are acts that are not meaningful, are intrusive, and suppress criticism. Assor et al. (2002) underscore the idea that, by exercising curricular autonomy in ways that encourage student autonomy, teachers can help students to understand how their schoolwork is relevant to their personal goals and interests; student autonomy, they argue, is an important predictor of engagement in schoolwork, implying that teachers should use their curricular autonomy in ways that meet students' individual interests and needs.

In addition, Chirkov and Ryan (2001) bring culture to the forefront by discussing how teachers' curricular autonomy plays a mediating role in harmonizing cultural differences between high school students from the United States and Russia. One aspect of the article that is of particular relevance to this study is its inclusion of parental support as a variable that could strengthen the effect of teachers' curricular autonomy on student learning. In other words, the authors claim that support for autonomy by teachers and parents helps students to acquire psychological attributes, attitudes, values, and motives that are instrumental in fostering relationships between different cultures; teachers' curricular autonomy, they argue, should be ensured in order to provide autonomy support to students. Students from both of the studied cultures perceived that greater teacher and parental autonomy support predicted their well-being and increased their academic self-motivation.

Another line of literature that emphasizes the indirect association between teachers' curricular autonomy and students' learning is related to teachers' sense of commitment to teaching. As an example, Rosenholtz (1989) argues that the teachers in her study from 78 elementary schools in U.S. were more likely to be committed to teaching and their students when their autonomy over curricula was ensured, since they believed that the exercise of curricular autonomy was one of the rights of teachers as professionals. This point was elaborated by K. Shin (2009), addressing the idea that teachers with control over curricula are more confident in implementing the curriculum, seeing as it has been developed based on their own instructional considerations; they also felt a stronger sense of responsibility than teachers without curricular autonomy.

While most of the literature discusses teacher autonomy in terms of traditional teaching and learning environments, Drexler (2010) is unique in explaining the value of enhanced teacher autonomy in online environments. Based on his experiment, Drexler (2010) found that secondary school teachers who employ effective autonomic network models underscore their curricular autonomy, promote students' digital literacy, make the learning process flexible, and empower the learners in the southeastern U.S. According to Drexler (2010), when teachers have curricular autonomy and embrace emerging technologies, they create personalized learning environments that have positive effects on students' academic achievements. This point is reinforced by other studies that illuminate the positive effects of technology-enhanced curricula by providing students with customized learning experiences (Collins & Halverson, 2009). For example, Walkington (2013) conducted an experimental study with 145 ninth-grade students taking Algebra 1 in rural U.S. schools. By implementing Cognitive Tutor Algebra (CTA)—an intervention that allows teachers to adapt curricula based on their students' personal interests and needs—in one group

while another took the regular algebra course, these authors found that CTA supported a higher level of student achievement in writing algebraic expressions from story problems.

Switching the focus of this discussion from students to teachers, Song et al. (2011) highlight the significance of guaranteeing teachers' curricular autonomy in relation to their decisions to remain in or leave the profession. These authors recognized a discrepancy in the association between job autonomy and turnover intentions between their previous empirical study with teachers and studies that had focused on employees at other types of organizations. They then conducted brief interviews with a small number of the teachers who had participated in their survey research with teachers who taught career and technical education at middle and high schools in Oklahoma, U.S. They found that the limited curricular autonomy associated with being required to cover a "certain amount of material in a specific period of time, use existing textbooks, and choose from limited sets of activities that are primarily driven by concern for their students' performance on standardized or industry-based credentialing tests" reduced teachers' actual autonomy more so than that of employees at other types of organization (Song et al., 2011, p. 17). Therefore, they concluded that teachers who value greater autonomy in all aspects of their work are likely to leave the profession, while teachers who place less value on curricular autonomy are likely to remain, underscoring the importance of teacher autonomy in preventing teacher attrition. The next section discusses teachers' agency towards autonomy over curriculum in centralized education system.

The exercise of teacher curricular autonomy in centralized education systems. This section discusses how teachers' enhanced curricular autonomy has been exercised in practice, as well as examining related issues that need to be improved. It will focus on recent educational changes in Turkey, Indonesia, and Colombia in order to better understand South Korean teachers'

experiences with curricular autonomy. All three of the above countries used to operate highly centralized education systems with national curricula, but have recently begun to expand autonomy in educational practices at the local level as a feature of educational reforms.

First, Turkey's educational reform of 2000 highlighted a student-centered approach to curriculum development and implementation. To achieve its goals, the reformed national curriculum emphasized the need to empower teachers to determine their own instructional activities as well as to adapt content to students' varied needs, levels of academic achievement, and interests (Yildirim, 2003). Ozturk (2012) examines the extent to which teachers actually exercise curricular autonomy in practice. Using a qualitative research design, he investigated the participation of 11 secondary school history teachers in forming annual instructional plans. According to his findings, the 11 teachers had limited power to develop school-level curricula. In addition, the content of their classroom-level curricula was mostly adopted from textbooks provided as part of the national curriculum.

Interestingly, however, the Turkish teachers in Ozturk's study reported that they actually did practice curricular autonomy to some extent: They reflected extensively on their own preferences for and decisions regarding instructional activities and teaching styles in their classrooms. With this finding, Ozturk (2012) concluded that the 11 teachers were limited in their selection of teaching content, but, having been granted autonomy, they did not necessarily aim to reflect students' needs and interests in the way anticipated by the national curriculum reform.

This misalignment between official policy intent and practical implementation of the curricula by teachers was also found in Indonesia, another country recognized as having a highly centralized education system. Beginning in the 20th century, Indonesia began to redirect control of the national education curriculum from the Ministry of Education and Culture (MOEC) to local

educators. To clearly capture how teachers react to and utilize enhanced curricular autonomy, Bjork (2006) employed ethnographic methods to investigate how local-level practitioners, including teachers, implemented the Local Content Curriculum (LCC) educational reform in their teaching practices. For a year, he stayed in a city in East Java and examined six of the city's junior high schools, exploring how historical, political, social, economic, and religious factors affected teachers' practices with enhanced curricular autonomy. His findings underscore the difficulties encountered by teachers when educational authorities do not understand that they require mechanisms that support their implementation of decentralization policies.

Likewise, Agudelo-Valderrama (2006) argues that, when teachers are ordered to accept new curricular demands without being provided with the necessary conditions with which to succeed, curricular guidelines are often misinterpreted and new regulations are frequently implemented without substantial change occurring. This can be observed in the case of Columbia's Educational Revolution, which aimed to educate students to be critical citizens by emphasizing teachers' attention to the needs of the communities they served; thus, teachers were encouraged to take an active part in curriculum development (Agudelo-Valderrama, 2006). Employing a mixed-method approach with surveys and interviews, Agudelo-Valderrama (2006) investigated how 13 secondary mathematics teachers with varied teaching experience exercised their curricular autonomy in teaching algebra classes. He reported that gaps between the aims of the Educational Revolution and the teachers' practices were clear, making the argument that systemic change strategies to support teachers' attempts to reflect the new policies in their instruction are vital to the success of a reform.

Factors that influence teachers' exercise of curricular autonomy. As observed from the three cases described in the previous section, granting teachers a greater degree of curricular

autonomy does not necessarily guarantee their positive reactions or align their practices with the original intent of the policy. To elucidate what causes variation in teachers' perceptions and practices, this section discusses in detail those personal and environmental factors that either support or impede teachers' curricular autonomy exercise.

Personal factors. First and foremost, several existing studies illuminate how teachers' beliefs affect their perceptions or experiences regarding the exercise of curricular autonomy. To begin with, K. Shin (2009) reports that teachers' beliefs regarding the positive consequences of exercising curricular autonomy in terms of improving their professional development and students' learning promote their attempts to exercise that autonomy. Put specifically, one of the teachers interviewed by K. Shin (2009) noted that the teachers at his school often integrated their own interests when developing history curricula. He believed that this integration helped him to gain more expertise on the topic of interest and helped students to engage with the learning process.

> My strengths are in Central and South America, and Europe. I read a lot about the Middle East. So I feel comfortable about that. I love Africa. You can pick what you like and what you are familiar with. At Roosevelt, teachers pick what they would like, because they teach better…You go with a teachable moment. Kids asked about Cuba one time. I spent a whole time in talking about it. The whole nine-minute block was talking about me and my culture, my political beliefs. If you see that kids are interested in the topic, and they want to go a little deeper, you go deeper. (K. Shin, 2009, p. 204)

In addition, some literature sheds light on teachers' self-efficacy to exercise curricular autonomy and their beliefs regarding the optimal relationship between themselves and the curricula (Brown, 2009; Feiman-Nemser, 2001). For example, Yurdakula (2015) reports that Turkish teachers who viewed the curriculum merely as a guideline to which they could make

changes were more likely to exercise curricular autonomy, while teachers who viewed the curriculum as the Bible tended to adhere to Turkey's national curriculum. In addition, Forbes and Davis (2010) highlight the importance of teachers' capacity to make pedagogical decisions while using curriculum materials in order to implement inquiry-based approaches to science in their study with 46 preservice teachers from a Midwestern university in U.S., arguing that this capacity can be improved by practical experiences in which teachers are involved in curriculum adaptation or development processes.

In this literature review, no studies were found that solely investigated the associations between teachers' demographic variables and their exercise of curricular autonomy. However, Pearson and Hall (1993) provide informative ideas on this association, examining the effects of gender, age, teaching experience, educational attainment, and grade level most often taught on teachers' perceived sense of general and curricular autonomy. Specifically, they conducted a survey using the Teaching Autonomy Scale (TAS) with 204 practicing teachers from six geographically representative schools (two elementary, two middle, and two high schools from western, central, and eastern states of U.S.); they then analyzed the results by employing an ANOVA for the variable of grade level taught and multiple uni-variate t-tests for the remaining variables. The results indicate that gender, age, teaching experience, and the highest degree held were not significantly associated with the participating teachers' levels of perceived autonomy. However, the study did find that middle school teachers perceived higher levels of autonomy than elementary and high school teachers, while no significant difference was demonstrated between the latter two.

Although Pearson and Hall (1993) only found a significant association between perceived level of autonomy and grade level taught, the generalization for this finding should be critically

considered, since several studies demonstrate that educators' teaching experiences do matter in relation to their exercise or rejection of curricular autonomy (Gatbonton, 2008; Liston, Whitcomb, & Borko, 2006; Walls, Nardi, Avril, & Hoffman, 2002). For instance, in their study four student teachers (two elementary and two secondary school levels) from eastern university in U.S., Borko and Livingston (1989) found that novice teachers, unlike expert teachers, tend to reject their curricular autonomy due to low perceived levels of competency. The following excerpt demonstrates a novice teacher's hesitance to exercise curricular autonomy with regard to content coverage: "And I can't make those decisions myself. I don't know enough about math to know what to include and what not to" (Borko & Livingston, 1989, p. 486). More recently, Liston et al. (2006) echoed Borko and Livingston (1989) by citing the work of Johnson and The Project on the Next Generation of Teachers (2004). They pointed out Johnson and his colleagues' work that highlighted on the struggles that ten novice teachers from either elementary and secondary schools in U.S. encountered due to a lack of experiences: "Yet even when these resources are plentiful and strong, many beginning teachers report spending significant time finding materials, understanding and adapting district-adopted curricula, and developing purposeful lessons" (p. 353).

Environmental factors. The literature reviewed also indicates that external factors, ranging from students' distinctive characteristics to social norms regarding the role of education, influence teachers' exercise of curricular autonomy. To begin with, culture can be identified as an important factor that affects teachers' exercise or rejection of curricular autonomy. Herein, culture refers to public representations that are often shared within certain groups of people (Klein & White, 1996; Sperber, 1996). Although its main focus is students rather than teachers, Littlewood's (1999) study is still useful for understanding the need to examine culture as an identifying factor that influences teachers' exercise of curricular autonomy. The author contrasts the cultural differences between

Western and Eastern countries in order to claim that autonomy is not a "culture-free" term and that it needs to be redefined in a broader and unbiased manner (Littlewood, 1999, p. 73). He points out that Eastern people's higher level of collective orientation, acceptance of hierarchies and power, and emphasis on self-discipline and effort, as influenced by the Confucian tradition, for instance, makes for different understandings between Eastern and Western countries regarding the appropriate forms of autonomy.

As Littlewood (1999) illuminates, the Confucian tradition that originated in ancient China has permeated all strata of society in many Eastern countries as a dominant ideology and as a guiding set of ethical principles (T. Kim, 2009). Korea's adoption and transformation of Chinese Confucianism, for instance, is clearly reflected in their group orientation, rigid hierarchical social order, and belief in meritocracy (Eckert, Lee, Lew, Robinson, & Wagner, 1990; T. Kim, 2009). From this perspective, the following review of studies examines the influence of collaborative or authoritative school cultures, instrumental and efficiency-oriented perspectives in education, and governments' stronghold over education. These perspectives contribute to this study by identifying possible factors that may predict South Korean teachers' current and desired degrees of curricular autonomy.

First of all, Lu, Jiang, Yu, and Li (2014) have investigated Hong Kong primary school teachers' relationship with authority and collective orientation using a multilevel structural equation modeling technique and illuminate how collaborative environment-building led by school principals fosters teacher autonomy. To be specific, they examined the relationship among five constructs that are known to facilitate school effectiveness: the formation of collaborative structures, participative management, a learning culture, autonomy, and efficacy. These authors define participative management as "joint decision making or influence sharing among

organizational members who are at different hierarchical levels" (Lu et al., 2014, p. 242). Their results confirm that participative management fosters teachers' sense of autonomy and the existence of an indirect relationship between building collaborative structures and teacher autonomy, mediated by participative management. In other words, the efforts of principals to create collaborative structures to ensure teacher participation in decision-making fosters teachers' sense of autonomy.

In contrast, Pitt (2010) sheds light on school cultures reinforced by authoritative and hierarchal relationships among teachers, arguing that this is one of the barriers that prevents new teachers from implementing "the latest theories and best practices that legitimate university-based teacher education" and from fully using their autonomy in their instructional practices in a Western context (p. 3). The following quote represents a school culture that is unwelcoming and resistant to new ideas and the influence of authority in shaping new teachers' beliefs about learning and pedagogy.

> I had to pass my math classes off to these other teachers, and they're saying, "well, what have you covered?" And I'm saying, "we've done these expectations from the curriculum." "No, what units have you covered in the textbook?" And it was a really, really big deal…. I left two meetings in tears because I just felt like they couldn't understand what I had done and like what I had done was worthless to them….So, now in staff meetings when we're talking about how we're going to do this or what we're going to do, I bite my tongue a lot. Because I don't feel comfortable taking those risks… And then I close my door and I do what I want to do….If I was honest at those meetings, if I was up front about what I want to do, I wouldn't have anyone to eat lunch with. (p. 5)

Ingersoll's (2009) book *Who Controls Teachers' Work? Power and Accountability in America's Schools* presents arguments that support the point made by Pitt (2010) with regard to institutional authority. The author underscores that bureaucracy is among the elements of school system organization and defines "one particular mode of organizational administration and one particular means of managing large numbers of individuals organized to undertake large-scale, complex tasks" (p. 17). Ingersoll (2009) claims that, in emphasizing teacher accountability for bureaucratic reasons, school organizations strengthen their hierarchies and control teacher autonomy.

The issue of hierarchy also affects student-teacher relationships and has often been cited as one of the impediments to teachers' exercise of curricular autonomy (Little, 1995). For instance, Ho and Crookall (1995) argue that relational hierarchy and teachers' authority over students act as barriers that prevent teachers from reaping the benefits of enhanced curricular autonomy in their study with college students in Hong Kong. They explain that, when teachers openly communicate with students in non-authoritative ways, students share traits that can help teachers to actively develop customized curricula. This brings about meaningful learning experiences for each individual.

Lastly, the government's control over education has also been mentioned as a challenge experienced by teachers in exercising curricular autonomy; as such, it has been well-represented in the discourses of accountability. To be specific, Turchi, Johnson, Owens, and Montgomery (2002) argue that accountability strongly affects school climates in a way that drives teachers to focus only on demonstrating their performance through students' scores on standardized tests; this prevents teachers from fully exploring their curricular autonomy.

Similarly, Kubow and DeBard (2000) illuminate the impact of high-stakes proficiency testing on teachers' curriculum planning for creative instructional activities. Adopting a survey methodology and conducting focus group interviews with 193 suburban teachers (102 from high schools and junior high schools and 81 from elementary schools) in northwest Ohio, they report that over 64% of the participants agreed that proficiency testing had a negative impact on their ability to develop and implement creative teaching activities. Although the extent of teachers' agreement varied depending on school level and subject taught, it was obvious that the creativity required to exercise curricular autonomy was limited by high-stakes testing and the emphasis on teachers' accountability for their students' scores.

To summarize, this section has discussed research focused on the significance of curricular autonomy, teachers' actual practices as reported in the contexts of Turkey, Indonesia, and Columbia, and the personal and environmental factors that diversify teachers' experiences with curricular autonomy. To be specific, the literature that has been reviewed identified implications regarding the positive associations between teachers' exercise of curricular autonomy and students' improved academic performance in both traditional and online educational settings; it also implied that granting teachers curricular autonomy can promote the effective implementation of curriculum reforms as well as teachers' professionalism and commitment to their teaching practices.

However, the studies conducted in the three countries of Colombia, Indonesia, and Turkey demonstrate that teachers' perceived degrees of curricular autonomy and their actual practices do not necessarily coincide with the intentions of governmental education policy reforms , which have attempted to promote teachers' development of customized curricula to better meet students' varied needs and interests. In particular, the cases of Indonesia and Columbia demonstrate the necessity for systematic and effective strategies to support teachers' transitions from simply

following the national curriculum to utilizing their curricular autonomy (Agudelo-Valderrama, 2006; Bjork, 2006).

Several personal and environmental factors that mold teachers' perceptions, attitudes, and teaching practices surrounding curricular autonomy have been identified. In terms of personal factors, existing studies have investigated such demographic effects as gender, teaching experience, and grade level taught on teachers' perceived curricular autonomy. In addition, teachers' belief in the positive consequences of exercising curricular autonomy on their own professional development and the students' learning experiences, as well as their capacity to exercise curricular autonomy and how they characterize the relationship between themselves and the curricula, have also been identified as personal factors that influence teachers' exercise of curricular autonomy.

In addition, the studies reviewed have highlighted such external factors as students' characteristics, Eastern cultural values rooted in the Confucian tradition that emphasize a collective orientation, the acceptance of power and hierarchy, and the virtue of meritocracy, institutional cultures, and teacher accountability. The literature reviewed also indicates that studies that investigate the mediating effects of personal factors on the relationship between environmental factors and teachers' perceptions of the exercise of curricular autonomy are rare, making it clear that this topic requires further investigation.

Teachers' Exercise of Curricular Autonomy in Korea

Empirical literature that demonstrates teachers' perceptions or attitudes toward the second revised seventh curriculum reform, most recent curriculum reform, and their actual practices in South Korea is scarce across all school levels. However, two studies have provided insight into the factors to be investigated in relation to teachers' perceptions of their curricular autonomy as

enhanced by the most recent reform and the relationship between teachers' current and desired levels of curricular autonomy.

The first study, conducted by H. Park (2012), involved a survey of 437 elementary school teachers in Seoul. The central research question of this study was whether any statistically significant differences exist between the curricular autonomy actually exercised by teachers and their desired level of curricular autonomy when controlling for demographic variables such as school type, school size, and teachers' positions and teaching experience. H. Park (2012) developed survey items to measure the extent to which South Korean elementary school teachers currently exercise and desire curricular autonomy by breaking down the range of autonomy across the phases of curriculum planning and implementation, employing independent-sample t-tests and one-way ANOVA paired-sampled t-tests.

According to her findings, all of the demographic variables that were examined showed statistically significant differences between the extent to which autonomy is actually exercised and teachers' desire to exercise it (see Table 1). For example, the head teachers of departments were shown to have more curricular autonomy (both actual and desired) than homeroom teachers in the curriculum planning phase, while teachers in private schools had more actual and desired curricular autonomy than teachers in public schools during curriculum operation. In addition, H. Park (2012) also found that there were statistical differences between the degrees to which teachers currently exercised autonomy and their desired autonomy in both the curriculum planning and curriculum operation phases, concluding that South Korean elementary school teachers desire more autonomy throughout the two phases. Lastly, her survey questionnaire included one item that investigated teachers' perceptions of the external factors that limited their current curricular autonomy. The data analyzed indicated that rigid bureaucracy, strict regulations on curriculum

implementation, over-burdensome workloads, a lack of democratic and local communication processes, and a lack of relevant available resources were the factors most frequently cited by teachers as barriers to implementing curricular autonomy.

While H. Park's (2012) study highlights the influence of demographic variables on elementary school teachers' perceptions of their current and desired curricular autonomy, as well as the external factors that affect these perceptions, S. Kim (2010) sheds light on how teachers' demographic variables, such as gender, teaching experience, position, grade level(s) taught, and highest educational degree, affect their perceptions of the benefits of, and need for, exercising curricular autonomy, with important implications for personal factors to be examined in this study. She conducted a survey study of 272 elementary school teachers working in Seoul and used the Chi-square test to analyze the data. She found that teachers' grade level currently taught, teaching experience, and positions did not seem to cause different perceptions regarding the benefits of, and need for, exercising curricular autonomy; however, she did not report the effects of gender and the highest educational degree held on these same dependent variables.

Although W. Hong and Youngs (2014) discuss the perceptions of secondary school teachers on curricular autonomy rather than elementary school teachers, their article captures the most recent efforts on the part of teachers to use curricular autonomy in South Korea. In this study, the authors claim that teachers in South Korea do not fully benefit from the enhanced curricular autonomy offered by the most recent educational reform. They even demonstrate negative perspectives on the effectiveness of diversified curricula based on students' distinct needs and interests. Analyzing data from interviews with 12 secondary school teachers, they come to understand the causes of this phenomenon as the gap between the autonomy desired by teachers and the autonomy granted by the MOE, teachers' indifference towards the reform, school

inflexibility in using resources, and general social expectations regarding the role of secondary education in increasing students' academic achievements.

S. Lee (2009) offers another reason for Korean teachers' negative attitudes and limited practice of curricular autonomy, providing a detailed analysis of the curriculum reforms in order to highlight teachers' curricular autonomy over the course of history. Lee finds that national curriculum reforms tend to be ambiguous in defining the role and scope of teachers' curricular autonomy, using phrases such as "appropriate selection" (p. 90) and "enlarge teachers' curricular autonomy" (p. 95): Reforms, she argues, are often described as merely adapting national curriculum instructional materials for each region. This unclear direction hinders teachers from making successful transitions from following the national curriculum's directions to exercising their own curricular autonomy.

Unlike W. Hong and Youngs (2014) and S. Lee (2009), K. Lee (2014) provides a different perspective, arguing that new curricula always require a certain amount of time for adaptation via trial and error. Indeed, this study focuses on the misalignment between educational policies and their implementation in practice. I do not agree with the author's rather passive point of view, however. Rather than waiting for teachers to adapt to new changes, perhaps educational authorities need to take a more proactive approach to supporting teachers' practice of autonomy in the enhanced curriculum.

To summarize, this section has discussed the literature pertaining to teachers' exercise of curricular autonomy in South Korea. The studies conducted by Korean scholars with Korean elementary and secondary school teachers confirmed that demographic variables, such as position, teaching experience, grade level(s) taught, school type, and school size, are related to teachers'

perceptions of their degree of current or desired curricular autonomy, as well as their beliefs regarding the need for, or benefits of, exercising curricular autonomy.

In addition, the studies reviewed herein examined teachers' limited curricular autonomy and even negative perspectives on the effectiveness of exercising curricular autonomy in relation to the intentions of educational authorities. A rigid school culture with a lack of opportunities for democratic communication, strict regulations on curriculum operation, heavy administrative workloads for individual teachers, teachers' indifference to the curriculum policy changes, and the accepted social norms for the role of education have been cited as environmental factors that affect teachers' perceptions of curricular autonomy.

Furthermore, the literature reviewed has also shed light on the associations between certain relevant sociocultural factors, including school culture, Confucian culture, South Korean teachers' perceptions of the need for, and benefits of, exercising curricular autonomy, and their perceived degrees of current and desired curricular autonomy. It is also worth noting that the empirical studies examined in this section were conducted in just one region, Seoul. South Korean elementary school teachers' individual capacities might, however, vary by region, since each region in South Korea has somewhat unique sociocultural characteristics.

Teacher Agency with Mandated Educational Change

This section describes how the term 'human agency' has been discussed across the social sciences; it will then focus on how the particular concept of teacher agency has been described in relation to educational reform.

The concept of human agency. Human agency has been studied extensively across the social sciences, including within the field of education, and there are several different viewpoints on the nature and definition of the term. For example, Deci and Ryan (2002), in their Self-

Determination Theory (SDT), adopt the view that humans have a fundamentally innate motivation to integrate what they experience in order to achieve agency. However, their theory acknowledges that this intrinsic nature can be promoted or hindered in reality depending on certain social and contextual factors.

To be specific, the human intrinsic propensity to obtain a healthy "coherent sense of self" is coordinated by the complementary functioning of autonomy, defined as "being the perceived origin or source of one's own behavior" (Deci & Ryan, 2002, p. 8), and homonomy, defined as integrating oneself with others. Deci and Ryan (2002) use these two terms to elucidate the dynamic and constant interaction between human inner traits developed over time and social environments. They also clarify that the social environments that fulfill the three essential psychological needs—competence, relatedness, and autonomy—can support a person's general tendency to achieve agency (Deci & Ryan, 2002). According to this theory, competence, relatedness (referring to a sense of interconnectedness), and autonomy encourage people to interact with their surroundings by challenging their prior experiences and ultimately evolving to actualize their fullest capacities.

In addition, Bandura suggests three modes for the concept of agency: personal, proxy, and collective (Bandura, 1999; 2000; 2001; 2006). Although people have the capacity to intentionally plan, regulate, and reflect on their activities via their personal agency, they also encounter many situations in which they do not have direct control over the constraints that affect their actions. At these points, people require the expertise or resources of others to accomplish the desired activities. This phenomenon is called proxy agency and is exercised when an individual affects the actions of others who can carry out what he or she desires. Likewise, individuals lack the knowledge, resources, and skills necessary to accomplish many of the tasks that affect their lives; in these cases, they need to work together in groups. Collective agency denotes the joint capacity of personal

agencies to achieve shared objectives.

Lastly, Burns and Dietz's (1992) sociocultural evolution theory highlights the dynamic nature of human agency from an evolutionary perspective by describing it as a "continuous rather than a categorical property of actors" (p. 273). This viewpoint on agency differs from the developmental theory perspectives that describe many aspects of human development as specified stages and attempt to explain an individual's development based on the typical behavior patterns often observed at each stage. One of the representative developmental theories in the field of education is Piaget's stages of cognitive development, which generalize children's cognitive changes into the four stages of sensorimotor, preoperational, concrete operational, and formal operational, albeit within a child cognitive development rather than educational context. Piaget theorized that children's thought processes undergo a series of developmental transformations, wherein experiences at lower stages of the developmental process facilitate progression to higher stages (Berk, 1997).

While Piaget's theory proved to be highly influential in the emergence of developmentally appropriate practices toward an internationally accepted teaching approach (Kim & McMullen, 2012), numerous scholars have nevertheless criticized its assumptions (e.g., Kauchark & Eggen, 1999; Gelman, Meck, & Merkin, 1986). For example, Papalia and Olds (1996) highlighted the importance of considering unique traits in order to better understand children's development, and contended that a child's level of development is dependent upon her/his maturity, experience, culture, and ability.

Unlike the developmental theorists, in their sociocultural evolution theory, Burns and Dietz (1992) promote the generation of variety rather than making reductionist assumptions and acknowledge agency's continuous operation of selection and reproduction rather than biological

determination. Rooted in the theories of actor-system dynamics and social rules systems, Burns and Dietz (1992) pinpoint the significant roles played by internalized culture and varied individual characteristics:

> Individuals are socialized within a culture, and thus acquire some subset of the rules available in that culture…However strongly actions are patterned by rules, social life is sufficiently complex that some interpretation is required in applying rules to a specific action and interaction context. This interpretation allows some variability in action from individual to individual, and a limited role for agency. (p. 273)

The authors explain that achieving agency can be limited by three constraints: 1) impossible physical activities that would lead to disastrous consequences, such as not drinking water for a long time; 2) unthinkable rule-breaking actions that might be thinkable to others, such as committing incest; and 3) the agency of others who have the power to affect an individual's own agency.

Teachers as agents for imposed change. Educational scholars' examination of agency has often been conducted from a teacher-centered perspective, and their findings have not converged within a single viewpoint (Campbell, 2012). Campbell (2012) explains this divergence in relation to the changeable and context-specific traits of teacher agency that reflect on "values and assumptions of a political, social, and philosophical nature" (p.183). One of the perspectives on teacher agency that is related to this study describes teachers as change agents. Teachers have often been required to act as agents of change in relation to externally imposed educational innovations such as reform policies. A number of existing studies discuss teachers as change agents, dealing with the topics of teachers' resistance to change, the possibilities of change, and the roles that various stakeholders play in leading change (Lukacs & Galluzzo, 2014; Niemi, 2002).

Hall and Hord (1987) developed the Concerns-Based Adoption Model (CBAM) based on Fuller's (1969) conceptualization of teachers' concerns; this is one of the most frequently used theoretical frameworks to explain teachers' processes of adopting educational innovations. CBAM is comprised of three diagnostic instruments that are designed to describe and measure the change processes among teachers: stages of concern (SoC), levels of use (LoU), and innovation configurations (ICs). Both SoC and LoU focus on teachers' change processes with emphases on affective and behavioral changes at the individual level (Geroge, Hall, & Stiegelbauer, 2008), while ICs describe how each teacher's implementation of the same innovation may differ (Anderson, 1997; Kwok, 2014; Saunders, 2012).

Despite its wide usage, some critics challenge the fundamental assumption of CBAM that the change processes encompassing teachers' concerns are developmental in nature, not taking each individual's idiosyncratic characteristics into consideration (Anderson, 1997; Kwok, 2014). For example, Cheung, Hattie, and Ng (2001) express concern regarding the scarcity of empirical studies that corroborate the construct validity of SoC, subsequently conducting confirmatory factor analyses using data collected from 1622 primary school teachers who assisted in implementing the Target Oriented Curriculum (TOC), a radical curriculum reform led by Hong Kong educational authorities. The results indicate that SoC was not an appropriate fit for the data. Similarly, in a study comprising 812 secondary school teachers who implemented a school-based assessment of science students' practical skills in Hong Kong, Cheung and Yip (2004) discovered that the degree of teacher concern at higher levels is not necessarily strengthened by their experience with innovation, implying the need to identify other factors that influence teachers' achievement of agency.

Focusing on empirical studies that highlight teachers as agents of change, Pyhältö,

Pietarinen, and Soini (2012) examined how teachers in Finland perceived themselves as active professional agents in relation to the most recent school reform, the Undivided Basic Education (UBE) reform, which featured: learner-centered instructional strategies rooted in constructivist viewpoints and decentralization of curriculum development from the Ministry of Education to individual schools. This study adopted a qualitative approach, and 193 comprehensive school teachers from both primary and secondary schools in Finland participated by responding to an essay task titled "Remembering the Future" (Pyhältö et al., 2012). Both abductive strategy and a content analysis technique were employed to analyze the data gathered. The findings indicated that teachers' perceived professional agency varies in terms of context; the participants perceived a low level of professional agency when they were involved in the development of school-wide curricula, whereas they perceived strong professional agency when they worked in classroom-level curriculum development.

Second, Schweisfurth's (2006) study describes the tensions between teacher agency and school structure in terms of achieving the goals of reform mandated by the educational policy in Canada. The new Ontario curriculum highlighted the importance of global citizenship education, and teachers were expected to prioritize global citizenship issues in their teaching over other curriculum demands. This study investigated how individual teachers had achieved this, employing a multiple case study approach and methods that included documentary analysis, classroom observation, and interviews. According to Schweisfurth's findings, compared to those who did not, the teachers who carried out the reform agenda had more knowledge of how to use the curricular expectations, received more support from their colleagues, and were given more professional development opportunities that aimed to improve their understanding of how to interpret the national curriculum guidelines.

Third, many scholars have pointed out that teachers' belief systems strongly influence their curricular or instructional decisions and actions (Nespor, 1987; Pajares, 1992; Richardson, 1996). According to Nespor (1987), teachers' core belief systems contribute to their daily teaching practices, and their interactions with students, more than their knowledge about teaching hinders them from resolving any educational issues via a legitimate step-by-step process. However, a large body of literature also suggests that teachers' personal beliefs are developed socially and within the context of the cultures of the schools in which they work (Gee, 1990; Yerrick, Parke, & Nugent, 1997; Munby, Cunningham, & Lock, 2000).

Taking these two perspectives together, Wallace and Kang (2004) investigated the beliefs of six experienced high school science teachers in U.S. regarding: (1) what successful science learning comprised; (2) the purposes of laboratory work in science teaching; and (3) how inquiry is implemented in the classroom. These beliefs were investigated in response to a curriculum reform that featured inquiry-based science learning, and the authors employed an interpretive multiple case study structure with an ethnographic perspective. To collect data sources, the authors conducted two interviews in informal as well as formal settings, observed and videotaped the teachers' classroom instructional practices, and analyzed their lesson plans as well as students' learning materials and written teacher evaluations. Their findings revealed that the teachers tended to believe that achieving the agency of implementing inquiry-based instruction is difficult due to school cultures that value efficiency and exam preparation.

Associations between sociocultural factors, teachers' individual capacities, and teachers' agency. Taking Wertsch et al.'s (1993) sociocultural approach to agency as its theoretical lens, this study examines the structural associations among sociocultural factors, teachers' individual capacities, and South Korean elementary school teachers' current and desired

curricular autonomy. Wertsch and colleagues (1993) claimed that human agency is mediated by culturally, institutionally, and historically situated means and that these transform the "entire flow and structure of mental functions" (p. 341) in human agency. Grounded on their claim, this study examines school culture and Confucian values as sociocultural factors, and examines teachers' perceived self-efficacy and outcome expectancy in exercising curricular autonomy, as individual capacities; that is, as the "mental functions" (Wertsch et al., 1993, p. 341) of teachers that influence their agency.

As a critical member of a particular school, a teacher is situated within that school's distinctive culture (Stolp, 1994). Similarly, every culture has its own distinctive value system and orientation, which demonstrate what is significant within that society (Kluckhohn & Strodtbeck, 1961). Confucian values have dominated Korean people's daily lives as their moral compasses, and traditional orientation have affected their behaviors, values, working practices, and organizational systems and procedures (H. Lee, 2008). As members of particular schools and as citizens of South Korea, teachers' individual capacities, including their perceived self-efficacy and outcome expectancy in exercising curricular autonomy, are likely to be influenced both by their schools' cultures and Confucian values.

A supportive and positive school culture has been recognized in several studies as an important factor in improving teachers' self-efficacy. First, supportive school cultures led by principals have been featured in several empirical studies in the field of education (K. Ryu, 2013; Choi, 2011). For example, Blasé and Blase (2000) found that the school principal's willingness to listen to and try to resolve teachers' challenges enhanced teachers' self-efficacy and motivation in their study with teachers who were working at public primary, middle, and high schools in U.S. The following remarks demonstrate this:

> She listens to my problems and then responds in a way that makes me really think about things. She asks questions to get me to understand all aspects of a problem and then gives me stories of her own experiences.... The principal's suggestions encouraged me to continually be reflective about my teaching and student responses/outcomes. As I am teaching, I am more conscious of student attention.... I am not afraid to change my strategies. (p. 133)

In addition, the following extract from Blasé and Blase's (2000) study indicates the vital role a supportive school culture, promoted by both the principal and other teachers, can have in improving teachers' self-efficacy:

> Peer interaction has more impact than outside assistance. My own confidence levels have increased as I have been developing in an environment in which practice and application are encouraged and assistance is provided through both colleagues and supervisors.
>
> Teachers feel free to explore new options, share, and learn from both success and failure. I feel appreciated and motivated each day to continue to grow and learn from peers. (p. 136)

The crucial role of the school principal in supporting teacher autonomy was also highlighted by Lu et al. (2014). Among the five types of strategy used by principals in building collaborative environments, support for teachers' participation in the decision-making process was found to foster their sense of autonomy. In contrast, school cultures dominated by authoritative and hierarchical relationships among co-workers (Pitt, 2011; MacGregor, 2004) and between students and teachers worked as barriers to teachers' achieving autonomy over the curriculum.

A supportive school culture led by colleagues was also highlighted in Kruger's (1997) study with 28 elementary school teachers in Massachusetts, U.S. By adopting one of the elements

of social support described in Weiss's (1974) theory of loneliness, Kruger (1997) explained teachers' self-efficacy with regard to their overall problem-solving skills and the development of interventions for students' behavioral problems. In their study with teachers from elementary, middle, and high schools in U.S. Wahlstrom and Louis (2008) indicated that interaction with other teachers in various roles, such as mentor and mentee, enhanced teachers' perceived ability to adopt pedagogical practices that improved their students' learning experiences. Hoy and Woolfok's (1993) study with elementary school teachers in New Jersey, U.S. also indicated that a friendly atmosphere among teachers was one of the conditions for healthy schools and increased individual teachers' feelings of teaching-related self-efficacy.

School cultures that were supportive for students, in the form of warm and close relationships with teachers, not only improved students' self-efficacy in academic performance (Pianta, 1999; Birch & Ladd, 1997) and social adjustment (Pianta & Steinberg, 1992), but also enhanced teachers' sense of self-efficacy (Ross & Horner, 2007). For example, Kelm and McIntosh (2012) investigated the effects of implementing school-wide positive behavior support (SWPBS), an approach to creating a positive school environment, at the 20 elementary and eight secondary schools in Western Canada. They found that teachers in the schools with SWPBS had a higher sense of self-efficacy compared to the schools without the strategy.

Teachers who promoted a supportive environment for students were also more likely to believe that their exercise of curricular autonomy would help their students' academic performance. For instance, in their study with middle school teachers in the District of Colombia, U.S., Ringwalt, Vincus, Ennett, Johnson, and Rohrbach (2004) found that teachers' understanding of their students' characteristics, such as the ways in which non-white students' needs and learning styles differ from those of white students, made them believe that modifying a substance-use prevention program

would be more effective for achieving their teaching goals. Several studies have implicated the negative influence of Eastern people's collectivism or group orientation and of hierarchical and vertical relationship structures on the achievement of agency or autonomy (Littlewood, 1999). The term autonomy has been understood in many studies to be synonymous with "individualism" or "independence" (Chirkov, Ryan, Kim, & Kaplan, 2003). Therefore, the tendency of Eastern people to have a high sense of interdependence with others has often been discussed as a barrier to their exercise of autonomy (Littlewood, 1999). In addition, H. Kim and Park (2002) and Chai and Cho (2004) have argued that a high level of authoritarianism, such as that involved in excessive loyalty to superiors, hinders members of organizations from carrying out tasks that required individual autonomy, flexibility, and creativity. The following section discusses how the measurement of teacher curricular autonomy is discussed in educational research.

Assessment of Teacher Curricular Autonomy

This section discusses both the quantitative and qualitative approaches used to investigate teachers' curricular autonomy in various contexts. The literature reviewed reveals that there is no quantitative measurement solely and specifically designed for investigating South Korean elementary school teachers' curricular autonomy, other than that developed by H. Park (2012). Therefore, this section discusses three widely used quantitative instruments within the field of education that measure the construct of teachers' general autonomy, encompassing curricular autonomy: the Teaching Autonomy Scale (TAS) from Pearson and Hall (1993), the Self-Empowerment Index (SEI) from Wilson (1993), and the Teacher Work Autonomy (TWA) from Friedman (1999) (Strong & Yoshida, 2014).

The survey items for measuring South Korean elementary school teachers' perceived levels of actual and desired curricular autonomy were developed by H. Park (2012). With regard to the

measurements of teachers' general autonomy, although Strong and Yoshida (2014) mention the Sense of Teacher Work Autonomy (SAS) from Charters (1976) as one of the most popular instruments for studying teacher autonomy, they claim that the measurement is too outdated to reflect educational settings that have drastically changed since the 1970s. Therefore, this literature review describes the three instruments that were developed after 1990 in a detailed manner in order to examine their appropriateness for use with South Korean elementary school teachers.

First, Pearson and Hall (1993) developed the TAS instrument to measure teachers' perceptions of their work environments based on the Teaching Environment Scale (TES) devised by the second author in 1988. They considered the following four areas: "(a) selection of activities and materials; (b) classroom standards of conduct; (c) instructional planning and sequencing; and (d) personal on-the-job decision-making" (p. 174). The TES consists of 20 items that include statements worded both positively and negatively, and its reliability was tested by 73 in-service teachers across school levels who were taking the measurement course at the University of South Florida in U.S. The measurement uses a four-point Likert scale, with categorical answers ranging from "definitely true" to "definitely false."

Although the scale and items of the TES were initially used in the development of the TAS, two items were omitted while examining the internal consistency of the scale for the final instrument development, conducted with 29 elementary, 35 middle, and 130 high school teachers in Florida, U.S. In conducting an exploratory factor analysis, Pearson and Hall (1993) examined the construct validity of the TAS. The result generated two factors: general teaching autonomy and curricular teaching autonomy. Items regarding classroom standards of conduct and personal on-the-job decision-making were loaded into the former factor, whereas the remaining items, which were loaded to the latter.

Second, in adopting the notion of self-empowerment defined by Maslow's theory of self-actualization and Block's theory of empowerment, Wilson (1993) equates teacher autonomy with self-empowerment. Wilson (1993) argues, furthermore, that teachers who are self-empowered are sufficiently autonomous to value their judgments as the best reference for dealing with their work. Accordingly, autonomous teachers "are willing to express thoughts and feelings to others, are willing to take risks, are concerned with providing service to others, are open to learning from others, and participate in open, nonmanipulative relationships with others" (Wilson, 1993, p. 729). In conceptualizing teacher autonomy from the perspective of self-empowerment, Wilson (1993) initially devised 39 items and paired each with self- or non-self-empowered beliefs or actions; following pre- and pilot tests, only 25 of these items were included in the final instrument. Wilson (1993) next conducted an exploratory factor analysis with 334 practicing teachers across education levels in U.S. The results indicated three factors: (a) the courage to take risks; (b) self-reflection; and (c) autonomy. To be specific, 13, 6, and 6 items were loaded to (a), (b), and (c), respectively.

The third instrument reviewed in this study was Friedman's (1999) Teacher Work-Autonomy (TWA), an instrument that was developed through two phases, both involving Israeli elementary school teachers. In the initial phase, Friedman attempted to conceptualize the construct of teacher work autonomy by asking 52 elementary school teachers and principals to define which areas or actions required autonomy and to explain to what extent teachers generally required autonomy. With the data generated, the researchers identified six major domains that represent desired teacher work autonomy and developed 32 survey items based on these domains. This instrument was named Appropriate Teacher Work-Autonomy (ATA) and was tested by 156 teachers from 12 elementary schools in Israel who were randomly sampled in computer-aided sampling procedures via smallest space analysis (SSA).

For the second phase, the ATA was revised by Friedman (1999) to accommodate Teacher Work-Autonomy (TWA) as an instrument for examining teachers' perceptions of their existing levels of autonomy. A total of 650 elementary and secondary school teachers in Israel provided their input on the instrument, and four factors (see Table 1) were drawn from their factor analysis results, presented by eigenvalues according to Kaiser's rule and scree plots. From the factor analysis results, 10 items were deleted from the initial 42 items due to high skewness, kurtosis, and low item-factor structure coefficients; 32 items were included in the final TWA, with the scale ranging from 1 (not at all) to 5 (always). Friedman (1999) then demonstrated the validity of the TWA by conducting an internal consistency test using Cronbach's coefficient alpha, cross-validation that compared the factor analysis results from one sub-sample (n=325) to the other (n=325), and validity generalization techniques that compared the results from two different groups in terms of such characteristics as teachers in autonomous and non-autonomous groups and teachers at elementary and secondary schools.

Strong and Yoshida (2014) compared the three instruments in terms of their foci, definitions, and limitations. The TAS was designed by Pearson and Hall (1993) in order to examine teachers' perceptions of control over their working environments, while Wilson's (1993) Self-Empowerment Index (SEI) measures teachers' perceptions of their power, working from a construct of autonomy as self-empowerment (Strong & Yoshida, 2014). Strong and Yoshida (2014) criticize both instruments, arguing that TAS scores reveal huge differences among teachers at different school levels, thus raising the question of generalizability: Moreover, they argue that it is inappropriate to equate self-empowerment with autonomy in SEI, since a large body of research differentiates these two concepts.

Compared to these two instruments, Strong and Yoshida (2014) view Friedman's (1999)

TWA as the most promising measurement for use in the current U.S. education system, which is greatly influenced by the No Child Left Behind Act (NCLB). According to their study, the TWA is the most recently developed of the three measurement instruments and is more comprehensive in its definition of teacher autonomy, as it includes both pedagogical (individual) and organizational (school-wide) aspects. The TAS and SEI, meanwhile, focus only on classroom-related teacher autonomy. Although Strong and Yoshida (2014) initially queried the applicability of the instrument in U.S. contexts since it was developed for Israeli teachers, they conducted an exploratory factor analysis with 477 teachers from U.S. elementary and secondary schools and found that it is still reliable and valid in a U.S. context. However, its applicability to Eastern Asia has not yet been tested.

In the context of Korea, H. Park (2012) developed a survey questionnaire that measures elementary school teachers' perceived, practiced, and desired curricular autonomy on a four-point Likert scale with scores ranging from very low to very high. To develop the scale, she analyzed existing studies that addressed the tasks to be considered in developing school-level curricula in Korea, broke down these tasks into smaller units, and categorized them into two parts, namely curriculum planning and operation. For example, the tasks required for the phases of preparation and organization, such as setting school objectives or time allocations for each subject, were grouped under curriculum planning, while the tasks required for the implementation and evaluation of curricula, such as adding, modifying or deleting content in the curriculum for each subject or determining when, how, or with what to evaluate students' academic performance, were grouped under curriculum operation.

While studies that employ quantitative instruments developed solely to measure teachers' curricular rather than general autonomy have been seldom found in the existing literature, it is

worth noting that most of the empirical studies that investigate teachers' curricular autonomy identified for this review employed a qualitative approach. In particular, many studies adopted an interview methodology (Erss et al., 2014; W. Hong & Youngs, 2014; Ozturk, 2012). K. Shin (2009), for instance, used in-depth interviews with American history teachers to study how curricular autonomy actually affects teachers' development and implementation of curricula, how it enhances the quality of teaching, and what prevents teachers from exercising it. She selected Spring County of the Midwestern state of U.S. for recruiting interviewees because this area had not been highly affected by federal centralization policy. She explains that the teachers in Spring County exercised a relatively high level of curricular autonomy due to facing fewer "bureaucratic controls in local education" than teachers in other counties or states (p. 197). In interviews, she asked individual participants to freely describe in detail the characteristics of their classes, their practices of curricular autonomy to meet students' needs and interests, their own academic interests, what, why, and how they taught certain topics within the subject of history, and the barriers that hindered them from reaping the benefits of exercising curricular autonomy. However, K. Shin (2009) does not elaborate on how she analyzed the interview data or explain how she triangulated it to ensure its validity.

Ethnographic methods have also been adopted to study teachers' curricular autonomy. For instance, Bjork (2006) employed ethnographic methods to investigate how local-level practitioners in Indonesia, including teachers, implemented the Local Content Curriculum (LCC) educational reform in their teaching practices. For a year, he stayed in a city in East Java and examined six of the city's junior high schools, exploring how historical, political, social, economic, and religious factors affected teachers' practices of enhanced curricular autonomy. However, he, too, did not describe his data collection and analysis techniques or the ways in which he demonstrated what

Guba (1981) calls the transferability of the data.

To summarize, the literature review indicates that there is only one instrument that has been designed exclusively to measure teachers' curricular autonomy. Pearson and Hall's (1993) TAS includes curricular autonomy as one component of teacher autonomy, while Friedman's (1999) TWA contains items related to teachers' curricular autonomy. However, neither scale has yet been tested in an Eastern Asian context, raising questions regarding their applicability in assessing Korean teachers' perceptions of their current and desired levels of curricular autonomy. In contrast, H. Park's (2012) instrument seems the most appropriate for use in this doctoral study because it not only reflects the current structures required for developing school-level curricula influenced by the most recent curriculum reform in Korea, but the instrument has also been tested by elementary school teachers who work in Korea. Additionally, although a qualitative study format would capture the lively and rich experiences of Korean teachers' curricular exercise in practice, a quantitative approach with a larger number of teachers would contribute to this line of work by offering implications for the purpose of generalization (Creswell, 2014). The next chapter discusses method employed to this study in detail.

Chapter 3: Methods

This study examines the effects of sociocultural factors, specifically the supportive school culture fostered by the principal, by coworkers, and by the teacher-student relationship, and of Confucian values that pertain to collectivism and authoritarianism, on Korean elementary school teachers' current and desired exercise of curricular autonomy. This study also explores how Korean elementary school teachers' personal factors of perceived self-efficacy and outcome expectancy in exercising curricular autonomy mediate the associations between the aforementioned sociocultural factors and the extent of teachers' current and desired curricular autonomy exercise. Lastly, this study investigates the moderating effects of South Korean elementary school teachers' workloads between their two personal factors and the extent of their current and desired curricular autonomy exercise.

This chapter presents detailed descriptions of specific research questions and hypotheses and describes the quantitative research design chosen for this study, including the sample, procedures, measures used for both the pilot and primary studies, and data analysis techniques. However, this chapter will begin by discussing my position and describing how I inquired about Korean elementary school teachers' curricular autonomy exercise for my dissertation.

Researcher Positionality

Having been a student for 12 years at elementary, middle, and high schools and a public elementary school teacher for six years in South Korea's highly centralized education system, I had taken for granted the idea that teachers are interpreters and implementers of curricula handed down by an educational authority, which, in Korea, is the MOE. Throughout my time working as a teacher for grades three through six, I encountered educators who, rather than developing curricula themselves, worked to develop creative and effective instructional techniques and

strategies for supporting student learning based on externally provided curriculum guides and textbooks. Like me, these teachers assumed that the national curriculum covered the knowledge that was most essential for students at specific ages.

However, as I broadened my knowledge of curriculum theories by taking courses and exchanging perspectives with colleagues from around the world during my studies at Indiana University, I began to critically reflect on the passive position that I had taken as a teacher in Korea. I had been an instrument for delivering knowledge according to a given curriculum; during my studies, however, I started thinking that curriculum development, or even the adaptation of externally given curricula to reflect individual students' needs, is a critical element of a teacher's work.

At about the same time, I read a book entitled *The Teacher-Curriculum Encounter: Freeing Teachers from the Tyranny of Texts* written by Ben-Peretz (1990). This book played a critical role in changing my perspective on the relationship between teachers and curricula: it argued that teachers should forgo being passive receivers and delivery persons and, if not capable of developing their own curricula using their professional judgment to select which knowledge to teach, at least work to actively develop their capacity to evaluate and adapt curricular knowledge based on the contexts in which they taught.

This book also reminded me of my experience designing curricula for, and teaching, online English classes that were targeted at six at-risk elementary students of low socioeconomic status in Korea. Early in my career, I volunteered for a district-level project to help improve the academic performance of these six students, whose achievements at school were poor. At the beginning of the project, I used a standardized instrument to diagnose each student's level of knowledge given his or her grades and capacity for self-directed study. The use of this instrument, which was

intended to promote the development of customized curricula and instructional resources, was suggested by the district of education with which my school was affiliated.

This was the first time I was involved with developing personalized curricula for individual students. I ran this project for a year and observed how the students developed positive attitudes while improving their academic performance. This project was run in the sort of online environment that is often regarded as more convenient for implementing customized curricula as compared to face-to-face instruction, in which there can often be over 20 students in a class. It was also a special trial project supported by an educational authority to resolve a prevalent social issue, namely poor academic achievement for at-risk students. However, I found that my development of personalized curricula reaped significant benefits for myself such as developing skills to design customized curricula in online as well as the students in terms of improving their academic performance.

Further, by taking many courses on education since Fall 2013, I have deepened my knowledge of curricula, especially the relationship between teachers and schools, the various perspectives on what informative curricula ought to include, and the consequences of information selection in terms of student learning. Although I appreciate all of the meaningful learning experiences that I have had in these courses, I particularly value the development of my critical thinking skills in viewing curricula. Grasping the idea that knowledge is value laden rather than neutral has helped me to nourish my critical thinking skills and establish a research agenda aimed at encouraging teachers to be leaders in determining what to teach their students.

Through these teaching and learning experiences, I began inquiring about how current elementary school teachers in South Korea would perceive and practice autonomy over the curriculum imposed by the MOE's educational policies. I researched the most recent scholarly

discussions of Korean teachers' attitudes, perceptions, and practices regarding curricular autonomy. I also talked to my colleagues who are currently working as elementary school teachers in South Korea about their perceptions and practices of curricular autonomy. What I found was a situation that was not very different from what I experienced when I worked as an elementary school teacher in Korea.

Despite national curriculum reforms encouraging teachers to be creative and exercise more curricular autonomy, my colleagues (as well as the teachers described in prior research) still relied heavily on the national curriculum and the textbooks distributed by educational authorities, acting as passive middle persons between their students and the MOE. Existing studies highlighted heavy workloads, societal norms regarding the role of education, and rigid bureaucracy as barriers to exercising curricular autonomy, and my colleagues admitted to being concerned about standing out by implementing different curricula than their colleagues. They also perceived themselves as having a low level of capability for exercising autonomy over curricula and expressed skepticism about the benefits of exercising curricular autonomy. Based on this, I wanted to investigate how large numbers of Korean school teachers would answer questions regarding the extent to which they currently exercise or desire curricular autonomy and how sociocultural factors in their lives have influenced their agency for exercising and desiring curricular autonomy.

Research Design

This study employed a nonexperimental, quantitative, and correlational research design with survey (Gall, Gall, & Borg, 2007). Existing studies that address the topic of teachers' curricular autonomy in South Korea across school levels are primarily qualitative in nature and consider only a small number of teachers (W. Hong & Youngs, 2014; M. Park & Sung, 2013). Quantitative investigations considering a larger number of elementary school teachers would

provide a more reliable and comprehensive picture of how elementary school teachers in Korea perceive their curricular autonomy after the implementation of the secondly revised seventh curriculum reform, and would clarify the structural associations among sociocultural factors, individual teachers' personal factors, and teachers' curricular autonomy exercise (Cresswell, 2002; Patton, 2015).

According to Fraenkel and Wallen (2006), correlational research denotes studies to discover the degree to which multiple quantitative variables are associated, by using a correlation coefficient. Gall et al. (2007) asserted that the purpose of correlational research is to examine the causal effects of one variable on other variables. Gall et al. (2007) further explained that correlational research is widely and frequently used in educational studies, as this type of research is useful in analyzing how multiple variables influence the participants' behavioral patterns, which much educational research attempts to explore. Gall and colleagues (2007) also highlighted the critical role of theory in identifying the variables to be explored in ensuring the quality of the correlational study as follows:

> As in most research, the quality of correlational studies is determined not by the complexity of the design or the sophistication of analytical techniques, but by the depth of the rationale and theoretical constructs that guide the research design. The likelihood of obtaining an important research finding is greater if the researcher uses theory and the results of previous research to select variables to be correlated with one another (p. 335).

Although two studies conducted by S. Kim (2010) and H. Park (2012) have specifically investigated South Korean elementary school teachers' perceptions of their curricular autonomy exercise using survey methodology, they could not identify the effects of influential sociocultural factors or teachers' personal factors on their curricular autonomy exercise. Both S. Kim (2010)

and H. Park (2012) reported only descriptive results and included only one item on their survey about teachers' perceptions of barriers that prevented them from exercising their curricular autonomy and about the reasons teachers thought curricular autonomy is unnecessary to exercise.

To remedy this gap, this doctoral study attempted to examine associations among multiple variables that represent sociocultural and personal factors and teachers' exercise of curricular autonomy and the degrees in which they are related to each other. These purposes of the research well demonstrate the usefulness of employing correlational study. In addition, the constructs of sociocultural and personal factors as school culture, Confucian values, teachers' self-efficacy, and outcome expectancy have been selected as the factors that influence teachers' autonomy exercise over curriculum based on the theories such as Bandura (1986)'s social cognitive theory and Wertsch et al. (1993)'s sociocultural approach to agency and results from previous research.

Research Questions and Hypotheses

To investigate the structural associations among sociocultural factors (school culture and Confucian values), personal factors (perceived self-efficacy and outcome expectancy in exercising curricular autonomy), and extent of teachers' current and desired curricular autonomy exercise, this doctoral study addressed five research questions and 48 corresponding hypotheses:

Research Question 1: Do school culture and Confucian values directly influence the extent of Korean elementary school teachers' perceived current and desired curricular autonomy exercise?

H1: Supportive school culture fostered by the principal will significantly and positively influence teachers' perceived current curricular autonomy exercise.

H2: Supportive school culture fostered by the principal will significantly and positively influence teachers' perceived desired curricular autonomy exercise.

H3: Supportive school culture fostered by co-workers will significantly and positively influence teachers' perceived current curricular autonomy exercise.

H4: Supportive school culture fostered by co-workers will significantly and positively influence teachers' perceived desired curricular autonomy exercise.

H5: Supportive school culture fostered by the teacher-student relationship will significantly and positively influence teachers' perceived current curricular autonomy exercise.

H6: Supportive school culture fostered by teacher-student relationship will significantly and positively influence teachers' perceived desired curricular autonomy exercise.

H7: Internalization of collectivism will significantly and positively influence teachers' perceived current curricular autonomy exercise.

H8: Internalization of collectivism will significantly and positively influence teachers' perceived desired curricular autonomy exercise.

H9: Internalization of authoritarianism will significantly and negatively influence teachers' perceived current curricular autonomy exercise.

H10: Internalization of authoritarianism will significantly and negatively influence teachers' perceived desired curricular autonomy exercise.

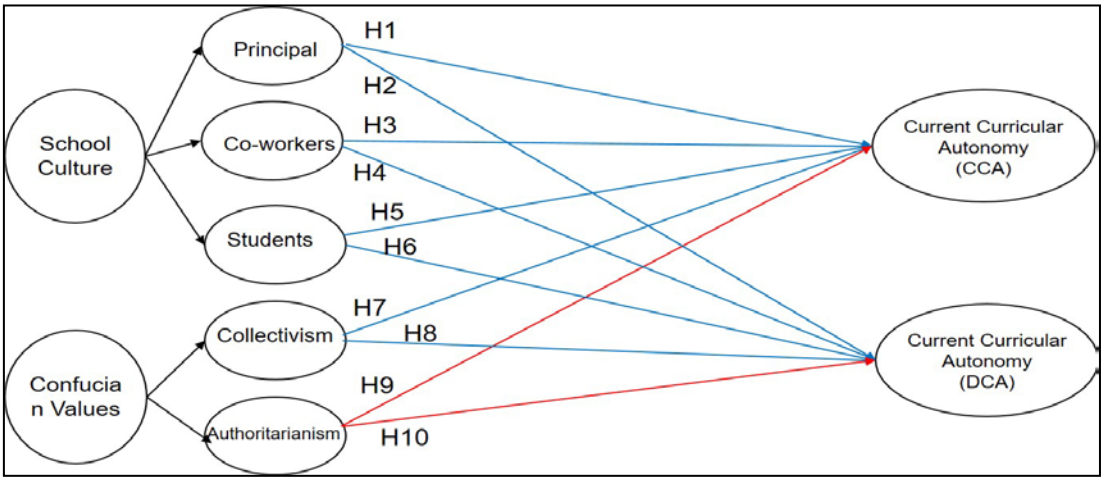

Figure 1. Hypotheses for research question 1

Research Question 2: Do school culture and Confucian values directly influence Korean elementary school teachers' perceived self-efficacy and outcome expectancy in exercising curricular autonomy?

H11: Supportive school culture fostered by the principal will significantly and positively influence teachers' perceived self-efficacy in exercising curricular autonomy.

H12: Supportive school culture fostered by co-workers will significantly and positively influence teachers' perceived self-efficacy in exercising curricular autonomy.

H13: Supportive school culture fostered by teacher-student relationship will significantly and positively influence teachers' perceived self-efficacy in exercising curricular autonomy.

H14: Internalization of collectivism will significantly and positively influence teachers' perceived self-efficacy in exercising curricular autonomy.

H15: Internalization of authoritarianism will significantly and negatively influence teachers' perceived self-efficacy in exercising curricular autonomy.

H16: Supportive school culture fostered by the principal will significantly and positively influence teachers' perceived outcome expectancy in exercising curricular autonomy.

H17: Supportive school culture fostered by co-workers will significantly and positively influence teachers' perceived outcome expectancy in exercising curricular autonomy.

H18: Supportive school culture fostered by the teacher-student relationship will significantly and positively influence teachers' perceived outcome expectancy in exercising curricular autonomy.

H19: Internalization of collectivism will significantly and positively influence teachers' perceived outcome expectancy in exercising curricular autonomy.

H20: Internalization of authoritarianism will significantly and negatively influence teachers' perceived outcome expectancy in exercising curricular autonomy.

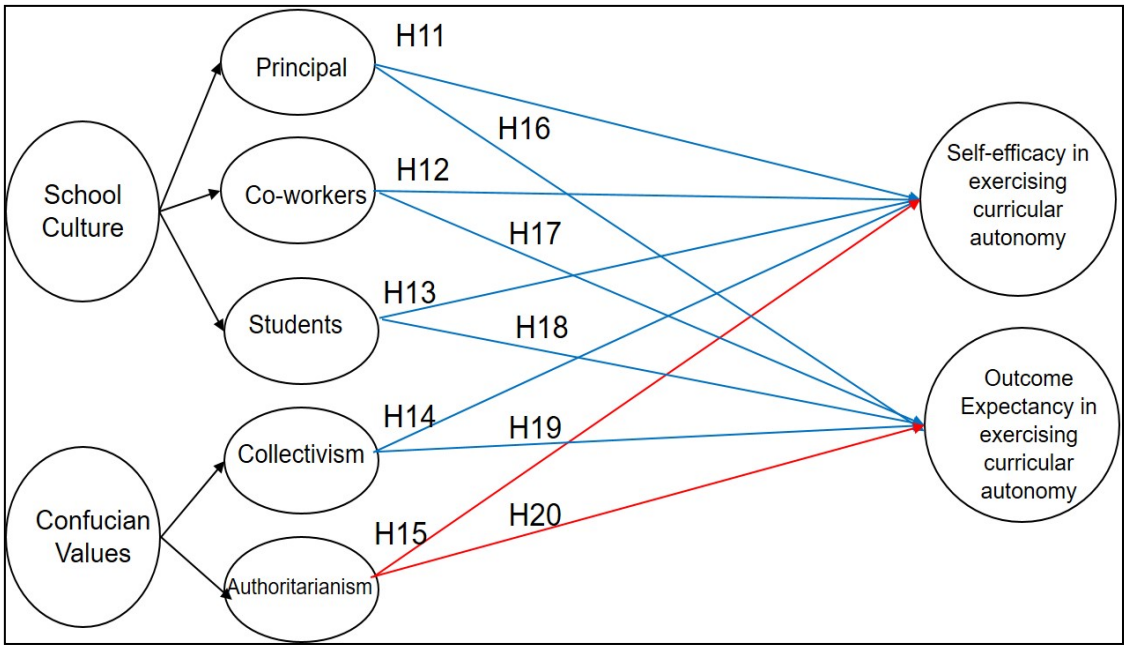

Figure 2. Hypotheses for research question 2

Research Question 3: Do Korean elementary school teachers' perceived self-efficacy and outcome expectancy in exercising curricular autonomy directly influence the extent of their perceived current and desired curricular autonomy exercise?

H21: Teachers' self-efficacy in exercising curricular autonomy will significantly and positively influence teachers' perceived current curricular autonomy exercise.

H22: Teachers' self-efficacy in exercising curricular autonomy will significantly and positively influence teachers' perceived desired curricular autonomy exercise.

H23: Teachers' outcome expectancy in exercising curricular autonomy will significantly and positively influence teachers' perceived current curricular autonomy exercise.

H24: Teachers' outcome expectancy in exercising curricular autonomy will significantly and positively influence teachers' perceived desired curricular autonomy exercise.

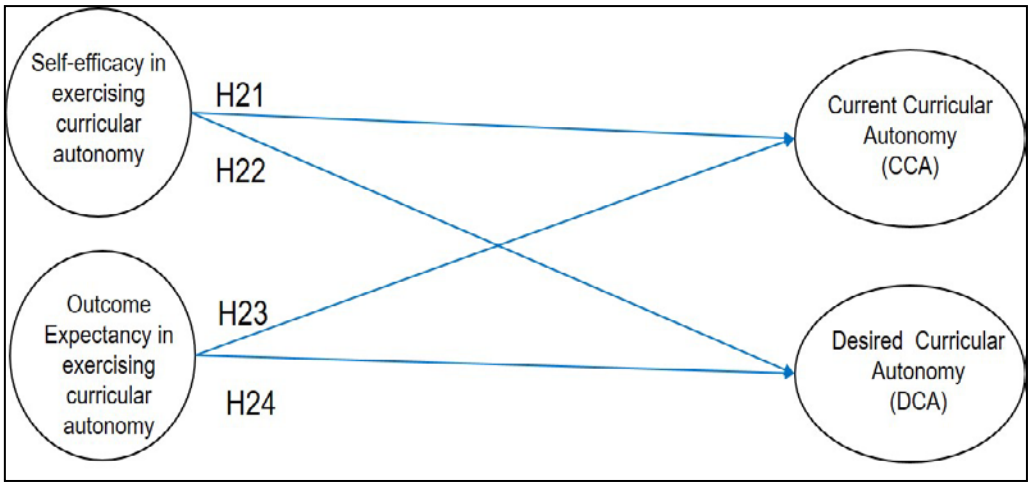

Figure 3. Hypotheses for research question 3

Research Question 4: Do Korean elementary school teachers' perceived self-efficacy and outcome expectancy in exercising curricular autonomy mediate between school culture and Confucian values and the extent of their perceived current and desired curricular autonomy exercise?

H25: Supportive school culture fostered by the principal will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H26: Supportive school culture fostered by the principal will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H27: Supportive school culture fostered by the principal will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H28: Supportive school culture fostered by the principal will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H29: Supportive school culture fostered by co-workers will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H30: Supportive school culture fostered by co-workers will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H31: Supportive school culture fostered by co-workers will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H32: Supportive school culture fostered by co-workers will indirectly influence teachers' desired curricular autonomy exercise through teachers' outcome expectancy in exercising curricular autonomy.

H33: Supportive school culture fostered by the teacher-student relationship will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H34: Supportive school culture fostered by the teacher-student relationship will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H35: Supportive school culture fostered by the teacher-student relationship will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H36: Supportive school culture fostered by the teacher-student relationship will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived

outcome expectancy in exercising curricular autonomy.

H37: Internalization of collectivism will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H38: Internalization of collectivism will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H39: Internalization of collectivism will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H40: Internalization of collectivism will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H41: Internalization of authoritarianism will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H42: Internalization of authoritarianism will indirectly influence teachers' perceived desired curricular autonomy exercise through their perceived self-efficacy in exercising curricular autonomy.

H43: Internalization of authoritarianism will indirectly influence teachers' perceived current curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

H44: Internalization of authoritarianism will indirectly influence teachers' perceived

desired curricular autonomy exercise through their perceived outcome expectancy in exercising curricular autonomy.

Table 1

Hypotheses for Research Question 4

Hypotheses	Sociocultural		Mediators		Teachers
H25	SCP	→	SE	→	CCA
H26	SCP	→	SE	→	DCA
H27	SCP	→	OE	→	CCA
H28	SCP	→	OE	→	DCA
H29	SCC	→	SE	→	CCA
H30	SCC	→	SE	→	DCA
H31	SCC	→	OE	→	CCA
H32	SCC	→	OE	→	DCA
H33	SCTS	→	SE	→	CCA
H34	SCTS	→	SE	→	DCA
H35	SCTS	→	OE	→	CCA
H36	SCTS	→	OE	→	DCA
H37	COL	→	SE	→	CCA
H38	COL	→	SE	→	DCA
H39	COL	→	OE	→	CCA
H40	COL	→	OE	→	DCA
H41	AUT	→	SE	→	CCA
H42	AUT	→	SE	→	DCA
H43	AUT	→	OE	→	CCA
H44	AUT	→	OE	→	DCA

Research Question 5: Are there any moderating effects of Korean elementary school teachers' workloads on the associations between their perceived self-efficacy and outcome expectancy in exercising curricular autonomy and extent of their perceived current and desired curricular autonomy exercise?

H45: Teachers' perceived level of workload moderates the relationship between their perceived self-efficacy in exercising curricular autonomy and the extent of current curricular

autonomy.

H46: Teachers' perceived level of workload moderates the relationship between their perceived self-efficacy in exercising curricular autonomy and the extent of desired curricular autonomy exercise.

H47: Teachers' perceived level of workload moderates the relationship between their perceived outcome expectancy in exercising curricular autonomy and the extent of current curricular autonomy exercise.

H48: Teachers' perceived level of workload moderates the relationship between their perceived outcome expectancy in exercising curricular autonomy and the extent of desired curricular autonomy exercise.

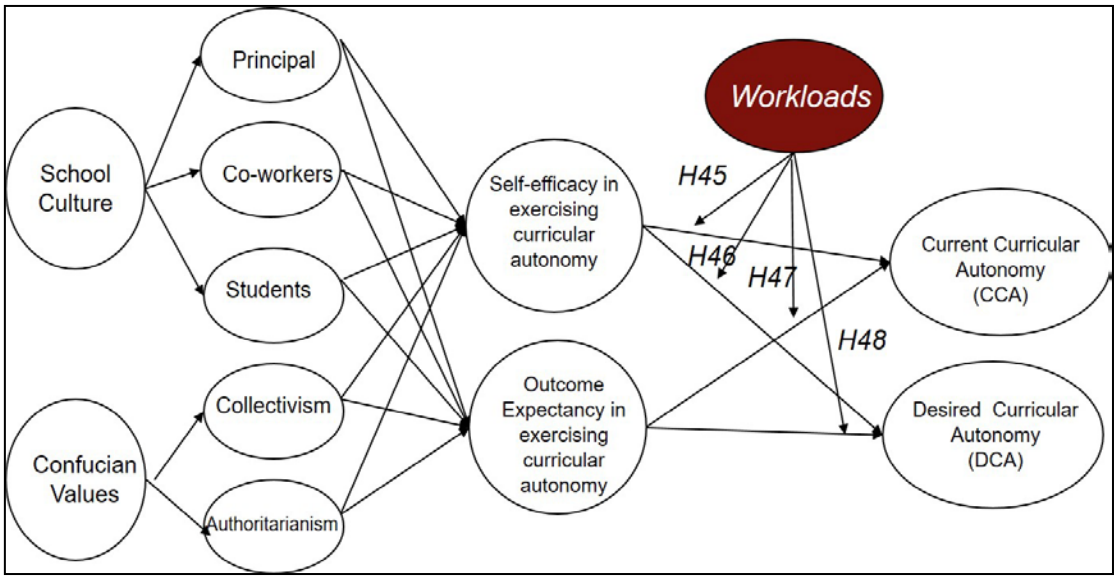

Figure 4. Hypotheses for Research Question 5

Pilot Study

A pilot study of 195 Korean elementary school teachers was conducted in October 2015 to test the psychometrical soundness of the survey instrument by identifying its dimensional structures and examining the internal consistency of all the items included in the structures, and

to make necessary adjustments to the survey instrument for the primary study. This section describes, in a detailed manner, the participants, data collection procedure, and measures used in this pilot study.

Participants. A total of 195 South Korean elementary school teachers participated in the pilot study, answering the online-type survey instrument. 34 male (17.4%) and 161 female (82.6%) teachers participated in this study. The participating teachers were asked to choose their current positions in their schools. As there are often cases in which head teachers take the role of either homeroom teacher or subject teacher together in the context of South Korea elementary education schools, they were allowed to choose multiple answers that applied to them. As a result, 30 (15.4%), 129 (66.2%), 29 (14.9%), and six (3.1%) teachers indicated that they worked as department head teachers, homeroom teachers, subject teachers, and others such as school health, nutrition, and special education teachers, respectively. One teacher did not provide his or her answer for this question.

Regarding teaching experiences, 71 (36.4%), 52 (26.7%), 29 (14.9%), 16 (8.2%), and 20 (10.3%) teachers had teaching experience of less than five years, five to nine years, 10 to 14 years, 15 to 20 years, and more than 20 years, respectively. Seven teachers did not provide the information of his or her teaching experience. Regarding educational qualification, 145 (74.4%) had a bachelor's degree, while two teachers (1.0%) had master degrees. In addition, 42 teachers (21.5) were currently working for their master degree. Among them, 190 teachers (97.4%) were working at national or public elementary schools.

With regard to the school size, 14 (7.2%), 44 (22.6%), 40 (20.5%), and 96 (49.2%) teachers worked in schools with one to six, seven to 18, 19 to 25, and more than 25 classes

respectively. Among them, 41 (21.0%), 15 (7.7%), 86 (44.1%), six (3.1%), and 47 (24.1%) teachers worked in Seoul, Incheon, Gyeonggi province, Dague, and toher regions respectively. Lastly, the participating teachers were asked to provide information on their current teaching grades. As there are often cases where teachers teach multiple grades depending on the school situation or their positions, the teachers were allowed to choose multiple answers that applied to them. The results indicated that 24 (12.3%), 21 (10.7%), 29 (14.9%), 47 (24.1%), 50 (25.6%), and 64 (32.8%) of the participating teachers taught 1st, 2nd, 3rd, 4th, 5th, and 6th grades.

Data collection. Participants in the pilot test were recruited using the following two modes. First, the researcher posted a recruitment message that stated the purpose of the research and included an online survey link to Indischool (http://www.indischool.com/), the largest online community of elementary school teachers in Korea. Indyschool was selected as the setting to recruit the target sample across regions in Korea, as it has a rigorous system for ensuring that all of its members are elementary school teachers who work in South Korea. Representatives of Indyschool require teachers who want to create an account with this community to send their proof of employment to them, and they notify the teachers of their approval upon affirming that it is legitimate. This system guarantees that all teachers who participate in the survey are elementary school teachers who work in South Korea.

Second, teachers at one local public elementary school in Incheon Metropolitan City and three local public elementary schools from suburban areas in Gyeonggi province were additionally asked based on the researchers' accessibility to each school. To be specific, teachers working in the four schools were asked to participate in the online survey through a message (stating the purpose of the study and containing an online survey link) sent by a data coordinator to each school through a messenger application built into the school's intranet. The data

coordinators were also teachers who worked in each school, and so they had access to the school intranet. For both modes, all participation was voluntary; however, to ensure a high rate of participation, the researcher included a statement that participants would be entered into a drawing for a $5 electronic gift card. No one was paid to participate in the survey.

Survey instrument. This section describes the development, components, validation and adaptation processes of the survey questionnaire used for the pilot study.

Survey development. Across countries, people present unique cognitive patterns based on their distinctive culture in responding to survey questions (Yang, Morris, Teevan, Adamic, & Ackerman, 2011). To be specific, according to Yang et al. (2011),

> It has been shown that Western cultures are associated with an analytic and low-context cognitive pattern, along with individualism, while Asian cultures are associated with a holistic, high-context cognitive pattern, along with interdependence and collectivist social orientation (Nisbett et al. 2001; Varnum et al. 2010). (p. 409)

Especially, in developing self-reported measures, consideration for survey participants' cultural values is important to ensure content validity (Beaton, Bombardier, Guillemin, & Ferraz, 2000).

To this end, the entire development processes for the survey instrument was led by myself, a Korean researcher accustomed to Korean culture. In addition, a Korean survey expert and two current Korean elementary school teachers assisted in the development of the survey instrument. The survey questionnaire was initially developed in Korean and was reviewed by a Korean survey expert at Keimyung University in South Korea for the purpose of accurately considering and reflecting the target sample's cultural and linguistic uniqueness. Based on the expert's feedback, the wordings and arrangements of some survey items and the structure of the survey instrument were modified for better readability. Then, two separate cognitive interviews were conducted to

allow the researcher to understand the survey instrument from the target sample's perspective instead of the researcher's perspective and to identify any possible misleading statements prior to the distribution of the survey (Nápoles- Springer, Santoyo-Olsson, O'Brien, & Stewart 2006; Karabenick et al., 2007).

Cognitive interviewing, which has its origin in cognitive psychology, is often employed in survey development processes to identify items that may elicit response errors prior to the survey's distribution (Drennan, 2003; Willis, 2004). In cognitive interviews, a survey respondent is asked to share every thought that comes up in his or her mind when going through the questionnaire with the researcher. The respondent thinks out loud to answer any questions the researcher might ask (Dillman, 2000). This technique is particularly useful when there is uncertainty regarding how respondents will answer the survey questionnaire or doubts they have about their understanding of the wording of the items in the instrument (Drennan, 2003).

Two elementary school teachers who were working in South Korean public schools participated in cognitive interviews through online videoconferencing technology. The researcher asked them to think aloud as they went through all of the items in the survey instrument while the researcher monitored whether the items were being interpreted and answered as intended. Notes were made whenever unintended interpretations from the two teachers were spotted, and, in order to resolve ambiguity, the researcher discussed them with the teachers after they had finished answering all of the survey items. Several proving questions such as "I noticed that you hesitated; tell me what you were thinking" and "how did you arrive at that answer?" were asked to clarify the interviewees' thoughts on some items during the cognitive interview.

Based on the evidence collected from the cognitive interview, the survey instrument was revised and backward translated into American English by the researcher, who is fluent in both

English and Korean. To ensure provisional Korean translation into American English as intended, the researcher conducted another cognitive interview with a native English speaker who used to be an elementary school teacher (Willis, 2004). When survey items that were not equivalently backward translated were found, notes were made during the interview. After the cognitive interview, the researcher and the native English speaker reconciled the problematic items and revised the wordings through an iterative (re)translation process (Willis et al., 2005).

The survey instrument developed for this pilot study consisted of 74 items that were intended to measure the following seven constructs: 1) current curricular autonomy; 2) desired curricular autonomy; 3) self-efficacy in exercising curricular autonomy; 4) outcome expectancy in exercising curricular autonomy; 5) school culture; 6) Confucian values; and 7) workload, and eight items for demographic information, ranging from gender to the grades taught by the participants. The survey items for the latent constructs of 1) and 2) were chosen for measuring the perceived extent of South Korean elementary school teacher's exercised or desired autonomy, while 3) and 4) were chosen for measuring teachers' personal factors that might influence 1) and 2) and mediate the associations between two sociocultural factors and extent of teachers' current and desired curricular autonomy exercise, constructs of 1) and 2). Additionally, the items for the latent constructs of 5) and 6) were chosen for measuring sociocultural influences on the same target participants, while the items for the latent construct of 7) were chosen for examining the moderating effect of workloads between teachers' personal factors (constructs of 3 and 4) and extent of current and desired autonomy exercise over the curriculum (constructs of 1 and 2).

The survey items for the constructs of 1) and 2), 5), and 6) were selectively taken from the instruments that had been developed by H. Park (2012), D. Ryu (2014), and K. Park (2005) for their dissertations and were adapted for better implementation to the target samples in this doctoral

study, considering its distinctive purpose from the three works. Findings drawn from quantitative instruments developed through research activities for unpublished theses and dissertations have been valuable resources for many scholars to support their own studies, and the quality of the findings is guaranteed as they are from works supervised by authorized higher education institutions (Vyhmeister & Robertson, 2014).

Additionally, as Hinkin (1998) stated, the potential survey items should adequately represent the constructs, and these three instruments did demonstrate their content validities via thorough processes for analyzing theoretical domains of interests and examining psychometric soundness within the distinctive context of cultural and educational systems in South Korea. For example, H. Park (2012) developed a list of tasks South Korean elementary school teachers need to consider when developing and operating school- and classroom-level curricula by thoroughly reviewing and analyzing Korean curriculum scholars' literature on teachers' practices involved in curriculum development and operation in relation to the guidelines for the second revised curriculum reform and suggestions for step-by-step procedures for carrying out effective curriculum-involved tasks. After developing the instrument, H. Park (2012) demonstrated its psychometric soundness through the results of exploratory factor analysis (EFA) and Cronbach's alpha test.

It should also be noted that H. Park (2012)'s instrument was designed to specifically measure the perceived extent of elementary school teachers' curricular autonomy in the context of South Korea's distinctive education system, which has traditionally been centralized but has increasingly become decentralized, with changes in tasks assigned to teachers regarding curriculum development and operation. As discussed in Chapter 2, instruments intended to measure the concept of teachers' curricular autonomy have been very limited (Strong & Yoshida,

2014), and none of them have been used in the contexts of Eastern Asian countries or countries with traditionally centralized education systems and a national curriculum. Therefore, H. Park's instrument was a credible source to refer to in order to develop contextually appropriate survey items to measure the extent of South Korean elementary school teachers' curricular autonomy exercise.

For this study, the survey items selected from H. Park (2012), D. Ryu (2014), and K. Park (2005) were modified to reduce the length of the entire list of items to be answered, in order to enhance the readability of the target samples and to remove irrelevant items from the study. More specifically, while the initial number of items used in the studies of H. Park (2012) and D. Ryu (2014) was 26 (the same 26 items used for both 1 and 2) and 40, respectively, the researcher included only 20 and 17 items for the pilot test. Likewise, the researcher included only eight items for the pilot test, while the initial number of items used in K. Park (2005) for Confucian values of collectivism and authoritarianism was 16.

The rest of the survey items for 3), 4), and 7) were developed by the researcher by referring to findings from prior studies that investigated teachers' practices of curriculum development in countries with centralized education systems and influential factors that affected teacher agency by impacting teachers' perception of curricular autonomy exercise and their individual capacity. The researcher obtained permissions via email to use and modify survey items selectively chosen from the works of H. Park (2012), D. Ryu (2014), and K. Park (2005).

Components. This section more specifically describes each construct of the survey instrument used for the pilot test. Appendix A provides a complete list of the questionnaire items categorized within their respective constructs along with the survey instruments. All the constructs in the survey instrument for this pilot study employed a 4-point, Likert-type scale without midpoint,

as many studies had reported that the middle category was often overselected by respondents when their opinions were not firm, reducing the reliability for the instrument (Alreck & Settle, 1985; Gilliam & Granberg, 1993; Weems & Onwuegbuzie, 2001). In fact, Masters (1974) questioned the utility and stability of the midpoint by reporting that score reliability decreased when a 4-point scale was increased to a 5-point scale. Cultural consideration was also made in using the 4-point, Likert-type scale for this study. According to prior studies that compared cultural differences in survey participants' response styles, people in East Asian countries were more likely to choose the midpoint on the scale compared to their counterparts in Western countries (Chen, Lee, & Stevenson, 1995; Spencer-Rodgers, Peng, Wang, & Hou, 2004; Hamamura, Heine, & Paulhus, 2008). For example, Chen et al. (1995) found that students from Japan and Taiwan who participated in their study had tendencies of choosing midpoint, while students from U.S. and Canada often chose extreme values. They further explained that these differences were highly associated with cultural differences, especially participant's cultural orientations towards collectivism and individualism, respectively, in Eastern and Western countries.

Teachers' perceptions of current and desired curricular autonomy. To measure South Korean elementary school teachers' perceptions of current and desired degree of curricular autonomy exercise, this study employed survey questions developed and used by H. Park (2012) for her master's thesis to examine teachers' perceptions of policies that enhance teachers' curricular autonomy and their current and desired curricular autonomy. The original survey developed by H. Park (2012) contained 26 items in which South Korean elementary school teachers' curriculum-related tasks were grouped into two sections—curriculum planning and operation—in order to measure current and desired curricular autonomy, but some of them were omitted from this doctoral survey because they stated tasks that are often done simultaneously by

elementary school teachers in South Korea or because they included a subject that no longer exists. The total number of items included in this study was 20 for teachers' perceived current and desired degree of curricular autonomy, and all of the items used a 4-point, Likert-type scale (1 = very low to 4 = very high).

Self-efficacy in exercising curricular autonomy. A total of 10 items were developed by the researcher to measure South Korean elementary school teachers' perceived capability for exercising curricular autonomy based on areas in which teachers can exercise curricular autonomy, as suggested by H. Park (2012). All 10 items used a 4-point, Likert-type scale (1 = very low to 4 = very high).

Outcome expectancy in exercising curricular autonomy. Six items were developed by the researcher to measure South Korean elementary school teachers' perceived outcome expectancy in exercising curricular autonomy based on findings that qualitatively investigated teachers' perceptions of the benefits of exercising curricular autonomy. All six items used a 4-point, Likert-type scale (1 = strongly disagree to 4 = strongly agree).

School culture. A total of 17 items from D. Ryu's (2014) study were selectively chosen and modified slightly for measuring school culture shaped by interactions with the school principal, colleagues, and students, with the aim of promoting readability. D. Ryu's (2014) study investigated associations among South Korean elementary school teachers' communication skills, school culture, self-efficacy, and subjective happiness to measure the supportiveness of school culture fostered by the principals. The items for measuring school culture were divided by D. Ryu (2014) into four components of culture that promote teachers' participation within school-wide decision-making processes and are influenced by the relationship with the school principal, coworkers, and students. Although D. Ryu (2014) reported the results for Cronbach's alpha coefficients to ensure

interconsistency of the items for each of the four components of school culture, she did not conduct a validity test for the items. Additionally, since the items from the original survey by D. Ryu (2014) were selectively included in the initial instrument, it was necessary for the researcher to conduct an EFA to ensure the validity of the items adapted from D. Ryu (2014) through a pilot test. All 17 items used a 4-point, Likert-type scale (1 = strongly disagree to 4 = strongly agree).

Confucian values. To assess the extent of South Korean elementary school teachers' internalization of the Confucian values of collectivism and authoritarianism, eight items were selectively borrowed from K. Park (2005) and modified slightly to reduce the entire length of the survey instrument and improve readability. In the original survey instrument designed by K. Park (2005), eight items for each latent variable of collectivism and authoritarianism were included. The researcher chose four items for each of these variables, respectively, and all eight items used a 4-point, Likert-type scale (1 = strongly disagree to 4 = strongly agree).

Workloads. To assess the extent of workloads perceived by South Korean elementary school teachers, six items were developed by referring to findings from existing qualitative studies that investigated barriers that prevented teachers from exercising their autonomy over the curriculum in their schools. All six items used a 4-point Likert-type scale (1 = strongly disagree to 4 = strongly agree).

Validation and adaptation. To examine the psychometrical soundness of the initial survey instrument for the pilot test, the results of Exploratory Factor Analysis (EFA) and Cronbach's alpha were reviewed. The EFA employed principal axis factoring as estimation method and oblique as rotation method. Principal axis factoring (PAF) is one of the most commonly used factor estimation procedures, and no substantial differences were observed compared to the results obtained from maximum likelihood factor analysis (MLFA). In addition, this pilot study was

interested in exploring all possible and relevant factors; PAF is a better choice than MLFA (De Winter & Dodou, 2012). For rotation method, oblique was selected over orthogonal because there were some factors whose correlations were around .32 and above, such as the factors CCI and CCE (see Appendix C for the full names of the factors extracted), by following the guideline suggested by Tabachnick and Fidell (2007):

> Look at the factor correlation matrix for correlations around .32 and above. If correlations exceed .32, then there is 10% (or more) overlap in variance among factors, enough variance to warrant oblique rotation unless there are compelling reasons for orthogonal rotation. (p. 646)

EFA results provide information as to the number of unique constructs needed to account for the pattern of correlations among a set of measures, by demonstrating underlying structure of associations for each set of measures in the survey instrument used (Fabrigar & Wegener, 2011). Likewise, Cronbach's alpha test offers estimations as to the internal consistency reliability for the set of measurements that used Likert-type scales as the instrument employed in this doctoral study with a single test administration (Gliem & Gliem, 2003).

A total of 13 interpretable factors were yielded and named as follows: 1) current curricular autonomy for plan; 2) current curricular autonomy for implementation; 3) current curricular autonomy for evaluation; 4) desired curricular autonomy for plan; 5) desired curricular autonomy for operation; 6) self-efficacy in exercising curricular autonomy; 7) outcome expectancy in exercising curricular autonomy; 8) supportive school culture fostered by the principal; 9) supportive school culture fostered by co-workers; 10) supportive school culture fostered by the teacher-student relationship; 11) collectivism; 12) authoritarianism; and 13) workloads (see Appendix C).

Items that had low factor loadings across the 13 factors and were loaded on multiple factors were dropped. In Appendix D, the factor loadings for the rest of the items are provided along with eigenvalues that was referred to identify the number of factors extracted for this doctoral dissertation and total and cumulative variances for each extracted factor. To examine the internal consistency of the items of each extracted factor, Cronbach's alpha coefficients were additionally calculated for each factor. The results indicated that all yielded factors demonstrated a high level of reliability (over .75), except for 13) Workloads, which had an alpha greater than .64 but less than .70 (see Appendix D).

Primary Study

The primary study was conducted to examine the effects of sociocultural factors, specifically a supportive school culture fostered by the principal, co-workers, and the teacher-student relationship, and Confucian values pertaining to collectivism and authoritarianism, on South Korean teachers' current and desired curricular autonomy exercise. The primary study also explored how teachers' personal factors of self-efficacy in exercising curricular autonomy and of outcome expectancy in exercising curricular autonomy mediate the associations between the sociocultural factors and extent of South Korean teachers' current and desired curricular autonomy exercise. This section describes, in a detailed manner, the sample, procedure, and measures used for this primary study.

Participants. A total of 627 South Korean elementary school teachers (83% female and 17% male) who were working in the public schools participated in the primary study, answering the paper-type survey instrument, which was adjusted based on the results of a pilot test conducted October in 2015. Among them, 22 responses were removed from this study because of its insincere answers such as marking one answer to all questions in the survey instrument.

Therefore, a total of 605 South Korean elementary school teachers' responses were considered for this study. 199 male (32.9%) and 406 female (67.1%) teachers participated in this study.

Among them, only 585 teachers identified their age. The participating teachers' ages ranged from 23 to 64, and their mean age was 35.43 (SD: 8.309). The participating teachers were also asked to choose their current positions in their schools. As there are often cases in which head teachers take the role of either homeroom teacher or subject teacher together in the context of South Korea elementary education schools, they were allowed to choose multiple answers that applied to them. As a result, 171 (28.3%), 494 (81.7%), 56 (9.3%), and 20 (3.3%) teachers indicated that they worked as department head teachers, homeroom teachers, subject teachers, and others such as school health, nutrition, and special education teachers, respectively.

Regarding teaching experiences, 52 (8.6%), 129 (21.4%), 336 (55.6%), and 87 (14.4%) teachers had teaching experience of less than two years, two to five years, five to 20 years, and more than 20 years, respectively. One teacher did not provide the information of his/her teaching experience. Regarding educational qualification, 496 (82%) had a bachelor's degree, while 106 (17.5%) and 3 (.5%) had master and doctoral degrees, respectively. All the participating teachers worked in public schools. Among them, 205 (33.9%), 344 (56.9%), and 56 (9.3%) teachers worked in the capital area, including the cities of Seoul and Incheon as well as Gyeonggi province, Dague, and other regions respectively, and 343 (56.7%) worked in schools with more than 25 classes, which is considered large for the purpose of this study.

Lastly, the participating teachers were asked to provide information on their current teaching grades. As there are often cases where teachers teach multiple grades depending on the school situation or their positions, the teachers were allowed to choose multiple answers that applied to them. The results indicated that 70 (11.6%), 80 (13.2%), 109 (18%), 118 (19.5%), 137

(22.6%), and 157 (26%) of the participating teachers taught 1st, 2nd, 3rd, 4th, 5th, and 6th grades. The demographic information of the 605 participants is summarized in Table 2.

Data Collection. For the primary study, Korean elementary school teachers who were working in public schools were sampled from two locations in South Korea, including a graduate school at Gyeongin National University of Elementary Education and five local schools in Dague Metropolitan City. The two locations have several advantages as sites for sampling. First, Gyeongin National University of Elementary Education is one of the 11 largest national teacher education institutions in South Korea in terms of the number of graduate school students enrolled, increasing the possibility of a high response rate. The institution's size is also beneficial to this doctoral study, as it means yielding large number of teachers in South Korea and because it is important to listen to their perceptions of professional curricular autonomy from a large pool. In addition, the two locations provide a nice representation of elementary school teachers from across the country, because the university produces elementary school teachers who work at public schools in Gyeonggi-do Province, which includes both suburban and rural areas. Local schools in Daegu Metropolitan City allow the researcher to reach out to elementary school teachers who work at public schools in urban regions.

All participants were selected on the basis of their accessibility to the researcher and were, therefore, non-random, convenience samples. While random sampling would provide a more accurate portrait of South Korean elementary school teachers' perceptions of current and desirable degrees of curricular autonomy exercise and the structural relationship among sociocultural factors, teachers' individual capacity, and teachers' perceptions of their curricular autonomy exercise, it is difficult to conduct a random survey for elementary school teachers in South Korea because low return rates for such a survey are expected.

Table 2

Questionnaire Participant Demographic Information

Demographic Information of Research Participants						
Gender	Male		Female			
n=605	199		406			
%	32.9		67.1			
Age	Minimum	Maximum	Mean	SD		
n=585	23	64	35.43	8.309		
Position	Department head teacher	Homeroom teacher	Subject Teacher	Other Teacher		
n=605	171	494	56	20		
%	28.3	81.7	9.3	3.3		
Teaching Experiences	Y>2	2≤Y<5	5≤Y<20	Y≥20		
n=604	52	129	336	87		
%	8.6	21.4	55.6	14.4		
Final Degree	Bachelor	Master	Doctor			
n=605	496	106	3			
%	82	17.5	.5			
School Type	Public		Private			
n=605	605		0			
%	100		0			
School Size	1-6	7-18	19-25	S>25		
n=605	24	112	126	343		
%	4.0	18.5	20.8	56.7		
Region	Seoul	Gyeonggi-do/In-cheon	Dague	Others		
n=605	15	190	344	56		
%	2.5	31.4	56.9	9.3		
Teaching Grade	1st	2nd	3rd	4th	5th	6th
n=605	70	80	109	118	137	157
%	11.6	13.2	18	19.5	22.6	26

South Korean teachers are usually very busy in school due to their tight teaching schedule and heavy administrative workloads (Kim & So, 2014; H. Park, 2012). Therefore, the researcher used convenience samples to make sure that there was a sufficient number of participants in this

study and that they were representative of the diversity of elementary school teachers in South Korea in terms of size.

Data collection was conducted by two data coordinators at both sites. The data coordinators received electronic files containing the survey questionnaires in pdf form from myself in the U.S. They then printed hard copies and administered the questionnaires at their respective sites. At the graduate school at Gyeongin National University of Elementary Education, the data coordinator distributed the survey questionnaires to elementary school teachers who were both enrolled in master or doctoral degree programs and who worked at public schools. At the local schools in Dague Metropolitan City, the data coordinator chose five schools to which he had easy access and recruited teachers who were willing to participate in the survey voluntarily. The two data coordinators mailed the completed survey questionnaires to me in the U.S. A total of 627 survey questionnaires (213 from Gyeongin National University of Elementary Education, and 414 from Dague) were received by myself in the U.S.

Survey instrument. Based on the results of the EFA and the Cronbach's alpha test that examined internal consistency for each factor extracted from the pilot study, the instrument was revised to improve its psychometric soundness. For example, wordings were reviewed and revised for some items that had lower factor loadings compared to other items in the same dimension, and more items were added for some constructs that had lower alpha coefficients compared to other factors. The researcher added more items to improve the internal consistency. The final instrument consisted of a total of 82 items, with the exception of 9 items for participants' demographic information. Higher participant ratings indicated higher agreement or favorable attitudes towards the individual items. The complete list of the questionnaire items categorized within their respective constructs is provided in Appendix E.

Teachers' perceptions of current and desired curricular autonomy (CCA/DCA). After consideration of the results of the pilot study, 17 survey items were included in the finalized survey instrument for the primary study. The items represented tasks in which South Korean teachers are mainly involved, namely planning, implementing, and evaluating the curriculum at school-, grade-, and classroom levels. All the items used the 4-point, Likert-type scale (1 = very low to 4 = very High) from the pilot study.

Self-efficacy in exercising curricular autonomy (SE). A total of 11 survey items were included in the finalized survey instrument for the primary study. All 10 items used in the pilot test were included in the final survey instrument, while the item of Comprehending school- or grade-wide curricula for subjects was broken into two separate items—Comprehending school-wide curricula for subjects and Comprehending grade-wide curricula for subjects—for respondents who may have had different answers to school- and grade-level curricula for subjects. No sub-constructs were created, since the results of the EFA conducted in the pilot test indicated one dimension and all 11 items used a 4-point, Likert-type scale (1 = very low to 4 = very high).

Outcome expectancy in exercising curricular autonomy (OE). South Korean elementary school teachers' attitudes toward exercising curricular autonomy were investigated using the six survey items that had been used in the pilot test. No sub-constructs were created, as the results of the EFA conducted in the pilot test indicated its unidimensionality, and all the six items used a 4-point, Likert-type scale (1 = very low to 4 = very high).

School culture (SC). Based on the results of the pilot test, this construct included items that represented the sub-constructs of School culture fostered by principal (SCP), School culture fostered by coworkers (SCC), and School culture fostered by teacher and students (SCTS). Five,

seven, and five items were included for each sub-construct in the finalized survey instrument. All 18 items used a 4-point, Likert-type scale (1 = strongly disagree to 4 = strongly agree).

Confucian values (CV). To measure the extent of South Korean elementary school teachers' internalization of Collectivism (COL) and Authoritarianism (AUT), four survey items were included in the finalized survey questionnaire for both COL and AUT respectively. All eight items used a 4-point, Likert-type scale (1 = strongly disagree to 4 = strongly agree).

Workloads (WKL). Three items were added to measure South Korean elementary school teachers' level of workloads, in addition to the three items used for the pilot test for the purpose of improving the internal consistency of this construct. Therefore, the total number of items for this construct was six. All the six items used a 4-point Likert-type scale (1 = strongly disagree to 4 = strongly agree).

Methods of analysis. The primary purpose of this study was to examine structural relationships among sociocultural factors (school culture and Confucian values), South Korean elementary school teachers' personal factors (self-efficacy and outcome expectancy in exercising curricular autonomy), and their agency for currently exercising or desiring to exercise autonomy over the curriculum. However, to obtain credible results that will explain the statistical associations well, an investigation of the psychometric properties and factor structure of the instrument used in this study was needed. A total of 627 responses to the hard copies of the survey questionnaires were entered into an Excel file by myself, and 3% of the responses (22 responses: five from Gyeongin National University of Elementary Education and 17 from Dague) that were filled out with insincere answers for most of the items—by choosing one answer to all questions in the survey—were removed from this study.

The Excel file, which included a total of 605 cases, was converted into an SPSS 21 file to analyze the descriptive characteristics of the survey items and to run EFA and Cronbach's alpha reliability test. In addition, AMOS 21, a computer program linked to the SPSS program, was used to conduct both confirmatory factor analysis (CFA) and structural equation modeling (SEM) analysis. For these processes, the data were divided into two parts based on random selection: one used for EFA (n=200) and the other used for CFA (n=405). For conducting SEM, all responses were used (n=605).

With the first data set (n=200), EFA was conducted to identify the underlying dimensions of all constructs in the survey questionnaire and to employ a meaningful factor solution that best represented the underlying latent variables for further analyses with CFA and SEM. This statistically reduced the original set of constructs into subsets of constructs (Crocker & Algina, 1986). Principal axis factoring and oblique rotation were employed. Results from the EFA indicated that three factors for the constructs of both CCA and DCA, one factor for the constructs of both SE and OE, three factors for the construct of SC, two factors for the construct of CV, and one factor for the construct of WKL were extracted. Among 82 items, a total of 11 that had low factor loadings or were loaded on multiple factors were removed.

With the second data set (n=405), a total of 71 items remained. CFA was further conducted to verify the factor structure. Two possible models (Models 1 and 2) were tested with the CFA to identify the model with better fit: the first model with the total individual items and the second model with three parcels created for the constructs of CCA/DCA, SE, and OE (see Appendix J), respectively. A parcel is an "aggregate-level indicator comprised of the sum (or average) of two or more items, responses, or behaviors" (Little, Cunningham, Shahar, & Widaman, 2002, p. 152). Parceling is used particularly in CFA and SEM analyses, as it has been

recognized as an approach to improve model fits. The parcels created are used as a manifest indicator of the latent construct (Little et al., 2002; Little, 2013). Regarding the psychometric advantages of parcels, Little et al. (2002) explains,

> Compared with item-level data, models based on parceled data (a) are more parsimonious (i.e., have fewer estimated parameters both locally in defining a construct and globally in representing an entire model), (b) have fewer chances for residuals to be correlated or dual loadings to emerge (both because fewer indicators are used and because unique variances are smaller), and (c) lead to reductions in various sources of sampling error (MacCallum et al., 1999). (p. 155)

For one-dimensional item sets such as the constructs of SE and OT, this study accepted Little et al.'s (2002) suggestion of random assignment in creating parcels. According to Little et al. (2002), random assignment means to assign each item (without replacement) to one of the parceling groupings. A number of parceling groups can be created depending on the number of items to be assigned, but two and three are common. Four-four-three items for the construct of SE and two-two-two items for the construct of OE were randomly selected with equal probability for each item, creating three parceling groups. The average of the items in the three parceling groups represented parcels to be loaded onto each latent variable of SE and OE.

Regarding the advantages of averaging the items over summing them, Little (2013) explains as follows:

> If you take sums and the number of times going into a parcel differs, the parcels will have different metrics, giving materially different means and variances. If you average the items, the parcels will have roughly similar metrics with similar (and comparable) means

and variances. Moreover, the scores on the parcels will reflect the actual scale that was used to record the item-level information. (p. 21)

For multidimensional item sets, this study followed Kishton and Widaman's (1994) suggestion of the internal-consistency approach, which creates parcels by using facets as the grouping criteria. For example, three facets identified by the EFA for the two constructs of teachers' current and desired autonomy were used as the grouping criteria in creating parcels. To be specific, the first parcel for the CCA reflected the facet of planning by giving an average of the corresponding items 1, 2, 3, 4, 5, and 6.

The second parcel reflected the facet of implementation by giving an average of the corresponding items 7, 8, 9, 10, and 11. The third parcel reflected the facet of evaluation by giving an average of the corresponding items 14, 15, 16, and 17. Likewise, the first parcel for the DCA reflected the facet of planning by giving an average of the corresponding items 18, 19, 20, 21, 22, and 23. The second parcel reflected the facet of implementation by giving an average of the corresponding items 24, 25, 26, 27, and 28. The third parcel reflected the facet of evaluation by giving an average of the corresponding items 31, 32, 33, and 34.

Lastly, two models were further analyzed using the SEM approach to test the path relationship between the items and latent variables (MacCallum & Austin, 2000): Model 1) the originally hypothesized model (see Figure 2) and Model 2) the re-specified model with connections of error terms for the constructs of CCA and DCA (see Figure 3). The processes and rationales for the re-specification are discussed in the next chapter in a more detailed manner.

Unlike the two-factor analyses (EFA and CFA) that highlighted correlational relationships among the latent variables, SEM analysis enables explanation of directional relationships that includes both the direct and the indirect hypothesized effects of exogenous

variables (acting as independent variables) and endogenous variables (acting as dependent variables) within a causal model structure (Gefen, Straub, & Boudreau, 2000). In the two models for this study, three constructs for school culture (SCP, SCC, and SCTS) and two constructs for Confucian values (COL and AUT) are exogenous variables, while the four constructs of SE, OE, CCA, and DCA, respectively, are endogenous variables.

To examine multiple mediation effects in this structural model, bootstrapping was further employed in AMOS 21. Bootstrapping is a non-parametric method based on multiple resamples of empirical data with replacement (Hayes, 2009). From each of the samples drawn, the point estimate of the indirect effect is estimated and a sampling distribution is empirically produced (Preacher & Hayes, 2008). Although Sobel's (1982) product of coefficients approach has been widely used to examine indirect effects in models with multiple mediators (Fritz & MacKinnon, 2007; Hayes, 2009), its shortcoming—namely, that it requires the assumption of normality—increasingly turned researchers' attentions to the bootstrapping strategy (Shrout & Bolger, 2002). Indeed, a large volume of the recent methodological literature recommended the use of the bootstrap approach to examine indirect effects (MacKinnon, Lockwood, & Williams, 2004; Mallinckrodt, Abraham, Wei, & Russell, 2006; Preacher et al., 2007; Shrout & Bolger, 2002). While bootstrapping can produce confidence intervals for indirect effects in the model with 100(1 – alpha)% percentile and bias-corrected confidence intervals (Hayes, 2009), some scholars recommend using percentile bootstrap if there are type 1 error concerns (Fritz, Taylor & MacKinnon, 2012; Hayes & Scharkow, 2013). After considering the type 1 error, this study referred to the results of percentile bootstrap. As AMOS 21 provides bootstrap estimates, SEs, and confidence intervals only for total indirect effects (the sum of all specific indirect effects) in a model that involves multiple mediation effects (MacKinnon, 2008; Mallinckrodt et al., 2006),

the phantom model approach, which provides information for the above for specific indirect effects, was employed (Macho & Ledermann, 2011). A total of 20 independent phantom models were created as total effects based on each indirect effect specified in Model 2 (see Figure 4). (Perera, 2013).

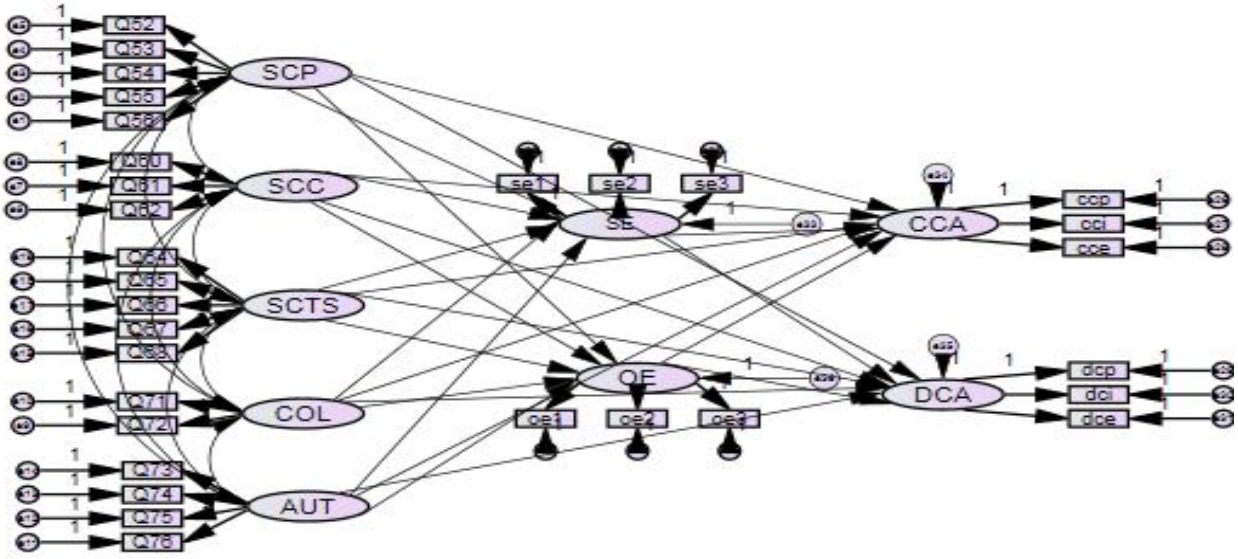

Figure 5. Structural model 1

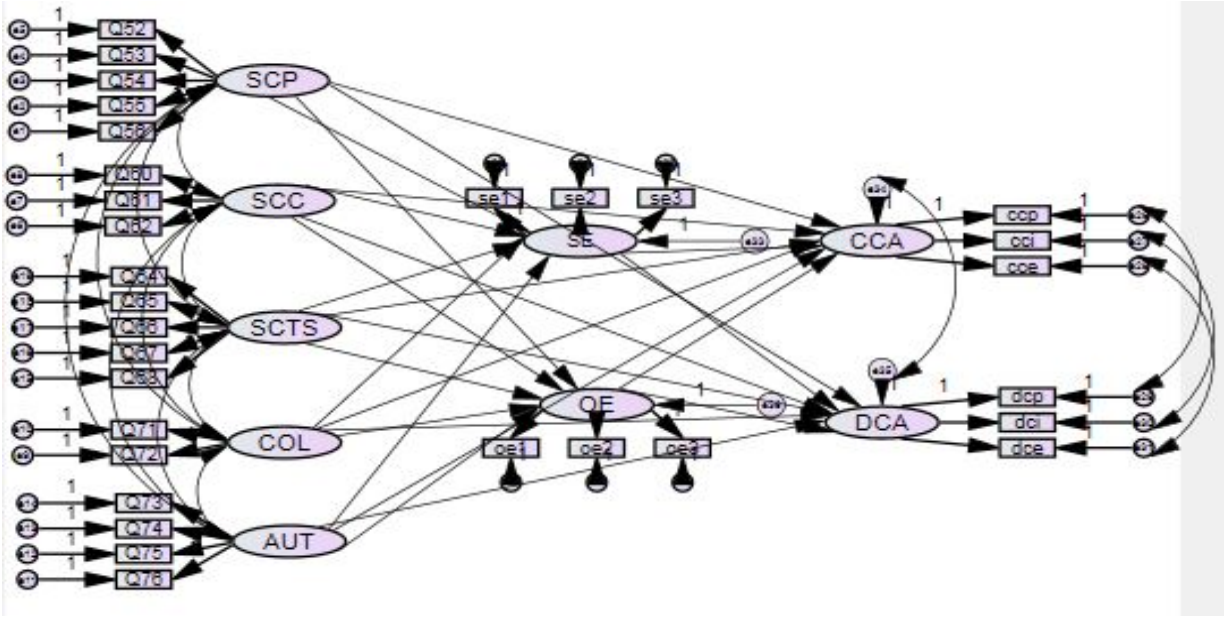

Figure 6. Structural model 2

The phantom model enables the researcher to conduct robust tests of specific mediation hypotheses based on bootstrap procedures within a conventional covariance structure framework (Perera, 2013). For example, four phantom variables were created to examine the mediating effects of SE and OE for the associations between SCP and CCA and DCA respectively (SCP-CCA, SCP-DCA) respectively.

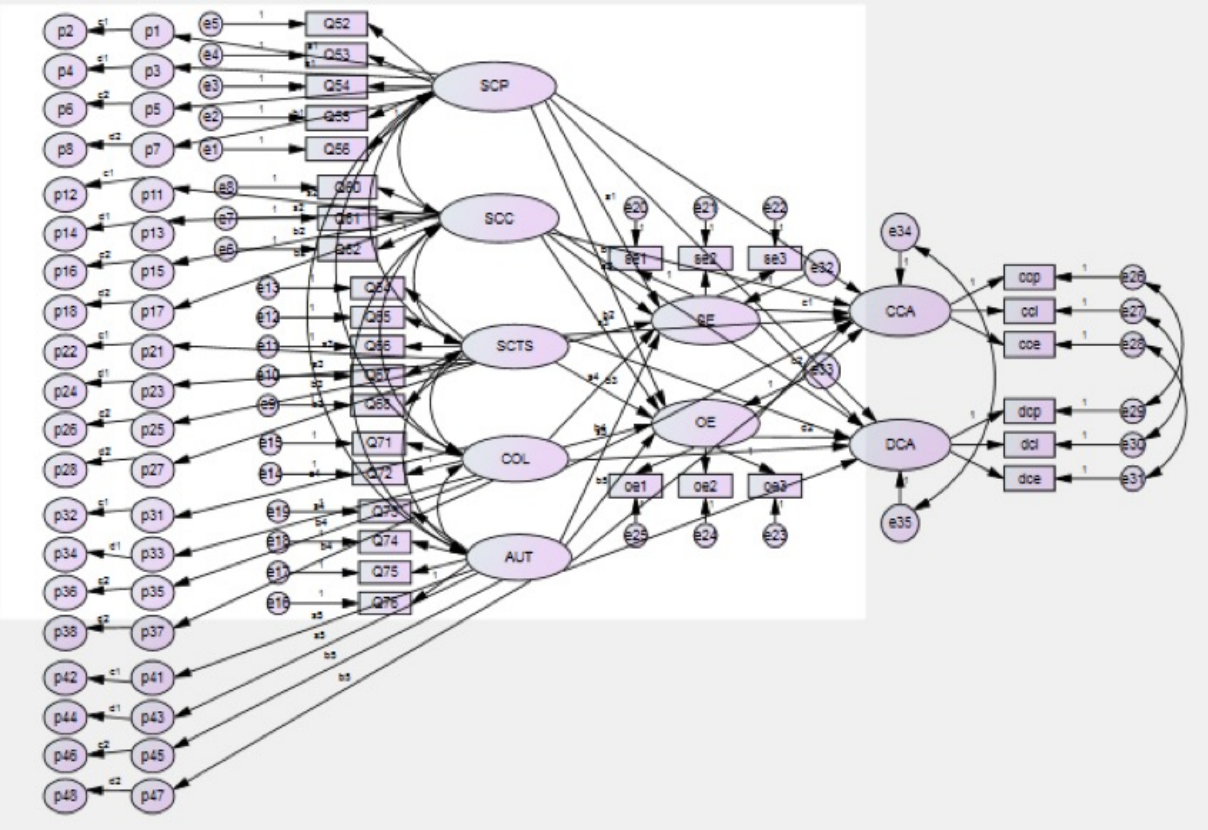

Figure 7. Phantom model for structural model 2

The moderating effects of WKL were analyzed with the model that demonstrated the best fit statistically and theoretically. To examine the role of WKL as the moderator between two personal factors (SE and OE) and teachers' curricular autonomy exercise (CCA and DCA), two groups of teachers were created based on the mean scores of the participating teachers' responses for the construct of WKL (M:3.245): One group was comprised of those who perceived their workloads as higher than the mean score (larger than 3.245), and the other group included those

teachers who perceived their workloads as lower than the mean score (less than 3.245). The statistical significance of the differences between the two groups was examined in AMOS 21, and the results are described in the next chapter.

Chapter 4: Results

This study examined the effects of sociocultural factors (school culture: SCP, SCC, and SCTS and Confucian values: COL and AUT) and how, on the extent to which they influence South Korean elementary school teachers' current and desired curricular autonomy exercise. This study also explored the mediating and moderating effects of teachers' personal factors (SE and OE) and workloads on the extent of current and desired curricular autonomy exercise, respectively. A total of 605 South Korean public elementary school teachers' responses were included in the sample of this study. Among these, 200 and 405 responses were used for conducting EFA and CFA, respectively. All responses were used for conducting SEM analysis. The study results are presented in the following sections: (1) descriptive statistics by the survey items; (2) results of EFA and CFA; and (3) results of SEM.

Descriptive Statistics of the Survey Items

To explore the distributional characteristics of the South Korean elementary school teachers' responses to the 82 items (excepting questions related to demographic information), the frequency analysis built in the SPSS 21 program was employed. All 605 respondents provided their inputs for all the 82 items. There was no missing case for the 82 items.

First, the teachers' perceptions of current curricular autonomy (CCA) had item means ranging from 1.83 to 3.28, while the desired curricular autonomy (DCA) had items means ranging from 2.73 to 3.43. Overall, the responses for each survey item that asked about the extent of curricular autonomy indicated that the participating teachers wanted more autonomy across the three areas of curriculum planning, implementation, and evaluation. Second, the results of descriptive statistics indicated that the participating teachers perceived their self-efficacy (SE) and outcome expectancy (OE) in exercising curricular autonomy as high and favorable enough to

exercise curricular autonomy. To be specific, the statistics of their SE were generally high, with the mean above 3.0 for all items—except for two items that had means of 2.89 and 2.96, both of which were still close to 3.0. Likewise, the OEs were quite positive with the means for all the items above 3.0. With regard to the sociocultural factors (school culture fostered by supportive principal (SCP), coworkers (SCC), and teacher and students (SCTS), and Confucian values of collectivism (COL) and authoritarianism (AUT)), all the means of the participating teachers' responses for SCP, SCC, and SCTS ranged from 3.10 to 3.61, indicating that their school culture was generally recognized as being supportive.

Interestingly, it was noted that the mean for SCP (maximum mean: 3.33) was lower than the mean for SCC (maximum mean: 3.57). In addition, the mean for SCTS (maximum mean: 3.61) was higher than the mean for SCC. Additionally, the means for the extent of participating teachers' internalization of Confucian values (COL and AUT) varied across items, ranging from 2.43 to 3.02. Lastly, all the items that asked for participating teachers' perceived levels of workloads had means above 3.0—except for two items with means of 2.96 and 2.80, which were both still close to 3.0. Therefore, it can be said that most of the participating teachers' recognized their workloads as high. The information of the values of minimum, maximum, mean, and standard deviation for each survey item is provided in Appendix G.

The Results for Exploratory and Confirmatory Factor Analysis

The EFA (n=200) yielded a total of 14 factors for the 82 items in the survey instrument used for the primary study. Unlike the pilot study with 195 South Korean elementary school teachers, which identified two dimensions for the construct of DCA (Desired curricular autonomy for plan and Desired curricular autonomy for operation), the EFA for this primary study demonstrated a clear distinction between DCI and DCE, which had been components of the

unidimensionality of the Desired curricular autonomy for operation. The factor loadings are presented in Appendix H. A total of 12 items (items 12, 13, 29, 30, 57, 58, 59, 63, 69, 76, 77, and 81) that had low factor loadings (less than .50) or were loaded on multiple factors were excluded. As a result, three factors for the constructs of CCA/DCA and school culture were retained with 15, 15, and 13 items for each, accounting for 63%, 70%, and 69% of the variances, respectively.

Likewise, two factors were retained for the construct of Confucian values with six items, accounting for 57%, while one factor for the three constructs of SE, OE, and WKL was retained with 11, 6, and 4 items for each, accounting for 57%, 62%, and 59% of the variances, respectively. Now that the structures of each construct were found to be as expected, that is, mostly aligned with the dimensionality identified from the pilot test, each extracted factor was named as contrived for the factors extracted in the pilot study (except for the factor named "Desired curricular autonomy operation"). The DCA that was used to include this factor in the pilot study yielded three factors: DCP (Plan), DCI (Implementation), and DCE (evaluation). Additionally, the coefficient alphas for all the 14 extracted factors were calculated. The results indicated that each factor had alphas ranging from .742 to .956, demonstrating high internal consistencies of the items for each factor (see Appendix H).

The factorial structure of the survey instrument was further examined using CFA procedures (n=405) with the AMOS computer program (Byrne, 2001). Two different models, namely Model 1 (without parcels) and Model 2 (with parcels), were tested separately to identify the one that demonstrated a statistically better fit and could be used for the SEM analysis later. AMOS's maximum likelihood method was used to examine the covariance matrix of the items. To examine the statistical fits of the two nested models (i.e., Model 1 and Model 2), this study used the indices of Akaike information criterion (AIC) and Bayesian information criterion (BIC).

The two indices have often been used to choose between nested models, as they allow for the simultaneous comparison of multiple nested models and do not depend on a subjective significance level (Posada & Buckley, 2004). In general, a model that has lower values of AIC and BIC is considered as the model with the better fit (Burnham & Anderson, 1998).

Additionally, the fits of the two models were further assessed with the following indices: 1) the comparative fit index (CFI);, 2) Tucker-Lewis index (TLI);, 3) the root mean square error or approximation (RMSEA);, and 4) the $\chi 2$ likelihood ratio statistic ($\chi 2$/df). The $\chi 2$ likelihood ratio statistic ($\chi 2$/df) was used in lieu of the $\chi 2$, as it has been recognized to be too sensitive to an increase in sample size and the number of observed variables (Fornell & Larcker, 1981; Hair, Black, Babin, & Anderson, 2010). The acceptability of the model was evaluated based on the suggested cutoff values of .90 or higher for CFI and TLI (Bentler, 1988; Browne and Cudeck, 1993) and .08 or lower for RMSEA (Kline, 2005; Schumacker & Lomax, 2004), and a range of not more than 3.0 for the $\chi 2$ likelihood ratio statistic ($\chi 2$/df) (Carmines & McIver, 1981).

The results of the two separate CFAs indicated that Model 2, with parcels for the four main constructs of CCA, DCA, SE, and OE, demonstrated statistically better fit than Model 1. Although the two indices of $\chi 2$/df and RMSEA for Model 1 achieved the cutoff criteria established as 2.382 (less than 3.0) and .058 (less than .08), the model's values for the AIC and BIC were much larger than the values for Model 2. In addition, the values for CFI and TLI of Model 1 were not closer to the cutoff of .09 compared to Model 2. Moreover, Model 2 satisfied the established selection criteria for all indices provided except TLI. Therefore, the Model 2 was selected as the measurement model for this study (see Table 3). The final CFA measurement model is provided below (see Appendix J). Additionally, to examine the internal structure and to assess the psychometric soundness of the measures in Model 2, evidence of convergent and

discriminant validity was assessed. According to Campbell and Fiske (1959), convergent validity is the extent to which concepts that should be related theoretically are interrelated in reality, while discriminant validity is the degree to which concepts that should not be related theoretically are, in fact, not interrelated in reality. The correlation matrix for all the 31 item components with Spearman rank order correlation demonstrates that the measures in Model 2 have convergent and discriminant validities (see Figure 5). For example, the three items consisting of SE are highly correlated, rSE1, SE2 = .703, rSE1,SE3 = .592, rSE2,SE3=.684, demonstrating evidence of convergent validity, while correlations with the other constructs included in Model 2 are low (ranging from .004 to .372), indicating evidence of discriminant validity.

Table 3

Fit Index Summary for Models 1 and 2

Model	$\chi 2$/df	AIC	BIC	CFI	TLI	RMSEA
Model 1	2.382	5185.943	6026.759	.849	.838	.058
Model 2	2.796	1370.928	1393.121	.902	.885	.067

Structural Model Analysis Results

The direct and indirect paths between the items and the latent constructs were examined with two different structural models. This section describes the results of the goodness of fit of all analyzed structural models, tests of hypotheses, and meditational analyses, and the role of WKL as a moderator.

Evaluation of the structural model. To assess the model fit, the following six indices were considered: 1) CFI; 2) TLI; 3) RMSEA; 4) the $\chi 2$ likelihood ratio statistic (CMIN/df); 5) AIC; and 6) BIC. For models with a good fit, the CFI and TLI should exceed .9 (Bentler, 1988; Browne and Cudeck, 1993), while the mediocre value for the RMSEA should be close to .06 (Hu

& Bentler, 1999). Lastly, a good model does not have a value of more than 3.0 for the Chi-square normalized by degrees of freedom ($\chi 2/df$) (Carmines & McIver, 1981) and should have lower values of AIC and BIC compared to alternative models (Burnham & Anderson, 1998).

Model 1 (see Figure 2), the originally hypothesized model, examined the mediating effects of the two personal factors (SE and OE) between sociocultural factors (school culture: SCP, SCC, SCTS and Confucian values: COL and AUT) and both CCA and DCA, as well as direct effects.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1																														
2	.703**	1																													
3	.592**	.684**	1																												
4	.315**	.313**	.260**	1																											
5	.269**	.329**	.192**	.778**	1																										
6	.223**	.258**	.274**	.694**	.743**	1																									
7	.254**	.123*	.213**	.066	.005	.049	1																								
8	.324**	.302**	.253**	.241**	.261**	.225**	.460**	1																							
9	.289**	.229**	.342**	.226**	.211**	.208**	.397**	.495**	1																						
10	.180**	.131**	.186**	.205**	.169**	.176**	.396**	.271**	.126*	1																					
11	.235**	.243**	.116*	.358**	.384**	.319**	.135**	.544**	.195**	.510**	1																				
12	.231**	.256**	.269**	.292**	.344**	.300**	.028	.367**	.455**	.314**	.527**	1																			
13	.305**	.270**	.281**	.155**	.143**	.143**	.348**	.285**	.380**	.051	.047	.092	1																		
14	.319**	.255**	.253**	.069	.089	.090	.275**	.195**	.308**	-.014	.055	.102*	.734**	1																	
15	.299**	.259**	.310**	.132**	.110*	.139**	.301**	.174**	.316**	-.011	.023	.107*	.709**	.791**	1																
16	.274**	.242**	.302**	.063	.058	.114*	.242**	.178**	.301**	.019	.020	.121*	.502**	.642**	.582**	1															
17	.355**	.282**	.312**	.103*	.093	.147**	.270**	.228**	.334**	-.034	.019	.124*	.609**	.722**	.717**	.700**	1														
18	.267**	.306**	.337**	.142**	.208**	.175**	.129**	.292**	.214**	.063	.183**	.237**	.283**	.273**	.279**	.260**	.266**	1													
19	.291**	.271**	.251**	.162**	.178**	.156**	.216**	.355**	.271**	.065	.140**	.198**	.335**	.316**	.292**	.338**	.327**	.480**	1												
20	.253**	.181**	.240**	.156**	.132**	.092	.197**	.231**	.256**	-.030	.054	.110*	.327**	.288**	.336**	.275**	.302**	.425**	.689**	1											
21	.335**	.341**	.357**	.199**	.200**	.200**	.083	.251**	.245**	.043	.120*	.183**	.337**	.318**	.348**	.415**	.353**	.527**	.497**	.452**	1										
22	.340**	.310**	.340**	.185**	.196**	.198**	.163**	.249**	.274**	.087	.105*	.179**	.341**	.336**	.340**	.418**	.397**	.527**	.433**	.405**	.714**	1									
23	.286**	.321**	.306**	.189**	.204**	.204**	.134**	.242**	.236**	.072	.099*	.194**	.259**	.251**	.265**	.335**	.303**	.550**	.470**	.392**	.648**	.744**	1								
24	.310**	.372**	.361**	.200**	.230**	.220**	.129**	.286**	.283**	.105*	.163**	.265**	.246**	.248**	.247**	.345**	.324**	.544**	.439**	.353**	.665**	.683**	.793**	1							
25	.224**	.274**	.294**	.152**	.159**	.172**	.158**	.212**	.263**	.067	.078	.205**	.228**	.208**	.217**	.300**	.253**	.368**	.323**	.306**	.474**	.570**	.579**	.624**	1						
26	.057	.018	.087	.022	.042	.031	.244**	.201**	.178**	.027	.039	.044	.132**	.158**	.184**	.154**	.225**	.195**	.223**	.239**	.177**	.124*	.168**	.149**	.046	1					
27	.068	.017	.104*	-.049	.005	.025	.224**	.214**	.184**	.014	-.001	.060	.111*	.102*	.125*	.112*	.145**	.226**	.142**	.145**	.223**	.134**	.197**	.194**	.118*	.648**	1				
28	.154**	.011	.111*	-.004	-.017	.049	.255**	.106*	.131**	.001	.007	.039	.179**	.228**	.237**	.225**	.287**	.199**	.193**	.203**	.190**	.228**	.154**	.120*	.091	.469**	.447**	1			
29	.099*	.009	.166**	-.028	-.029	-.025	.231**	.089	.197**	.022	-.080	.008	.181**	.216**	.242**	.221**	.210**	.161**	.165**	.188**	.125*	.189**	.127*	.087	.204**	.372**	.371**	.547**	1		
30	.166**	-.014	.131**	-.051	-.036	-.012	.223**	.065	.180**	.024	-.036	.049	.111*	.159**	.211**	.190**	.205**	.124*	.151**	.178**	.069	.099*	.055	.035	.025	.366**	.326**	.661**	.620**	1	
31	.095	-.047	.109*	-.089	-.090	-.044	.259**	.078	.176**	.057	-.066	-.003	.181**	.180**	.248**	.197**	.222**	.107*	.164**	.180**	.127*	.141**	.096	.088	.039	.394**	.341**	.638**	.527**	.689**	1

Figure 2. Correlation matrix

1-SE1, 2- SE2, 3-SE3, 4-OE1, 5- OE2, 6- OE3, 7-CCP, 8-CCI, 9-CCE, 10-DCP, 11-DCI, 12-DCE, 13-Item52, 14-Item 53, 15- Item54, 16-Item55, 17-Item56, 18-Item60, 19-Item61, 20-Item62, 21-Item64, 22-Item 65, 23-Item66, 24-Item67, 25-Item68, 26-Item71, 27-Item72, 28-Item73, 29-Item74, 30-Item75, 31-Item76

Note: *p<.05, **<.01

The model fit was rather poor in comparison with the fit criteria established. However, this model shed light on several possibilities of the indirect effects of the sociocultural factors on both CCA and DCA through the two examined personal factors. For example, Model 1 revealed the possibilities of the significant and positive mediating effects of SE between SCTS and both CCA and DCA. Additionally, the mediating role of AT for the association between SCTS and both CCA and DCA was also suggested through this model.

To improve the goodness of fit for Model 1, theoretical and statistical considerations were made (Jöreskog, 1993). AMOS provides information on how to improve the rather poor fit of Model 1 through a modification index. An inspection of the modification indices revealed that Model 1 would improve if correlations among the pairs of residual variances of the parcels were included in the model: 1) CCA and DCA; 2) CCP and DCP; 3) CCI and DCI; and 4) CCE and DCE. Other than this statistical consideration, theoretical and empirical studies across the fields and topics also demonstrated the possibilities for the correlations of the residual variances of the constructs related to current and desired experiences. People create ideas of what to expect or gauge the degree of expectation based on their previous or current experiences. For example, in the field of marketing, several studies reported that the degree of previous or current favorable experiences towards certain products highly influenced their repurchase intention (Gefen, 2000). Keeping this in mind, changes were suggested to the first model, leading to the development of a new model, Model 2 (see Figure 3).

Model 2 was significantly better than Model 1 and achieved the suggested cutoff values for $\chi 2/df$ (2.778), CFI (.937), TLI (.926), and RMSEA (.058). The values of AIC and BIC were also lower than they were for Model 1. Therefore, Model 2 was selected over Model 1 as the final structural model for this study (see Table 4).

Table 4

Fit Index Summary for Structural Model 1 and 2

Model	$\chi 2$/df	AIC	BIC	CFI	TLI	RMSEA
Model 1	3.780	1704.196	2127.098	.900	.884	.068
Model 2	2.778	1300.000	1740.523	.937	.926	.058

Testing of hypotheses for direct effects. Overall, 11 out of 24 hypotheses that examined the direct relationships between the latent variables examined in the final structural model were supported by the data from 605 South Korean elementary school teachers. Five exogenous variables (SCP, SCC, SCTS, COL, and AUT) and four indigenous variables (SE, OE, CCA, and DCA) were tested as the sociocultural factors in the model.

Teachers' current curricular autonomy exercise (CCA) was explained by the three sociocultural factors of SCP, SCC and COL and two personal factors of SE and OE with R^2 of .456. This means that taken together, these five constructs accounted for 45.6% of the variance found in the teachers' current curricular autonomy exercise. However, teachers' desired curricular autonomy exercise (DCA) was not explained by any of the five exogenous variables. Instead, two personal constructs of SE and OE accounted for 32% of the variance found in DCA. In addition, the supportive school culture fostered by the principal (SCP) and by the teacher-student relationship (SCTS) accounted for 22.1% of the variance found in the teachers' self-efficacy in exercising curricular autonomy (SE). Moreover, the test results indicated that teachers' outcome expectancy in exercising curricular autonomy (OE) was explained by the supportive school culture fostered by the teacher-student relationship (SCTS) and

authoritarianism (AUT) in the amount of 9.3% in a statistically significant manner (*p*-value = .05).

A summary of the hypothesis testing results is shown in Table 5. Supportive school culture promoted by principal and co-workers positively influenced individual teachers' current curricular autonomy exercise. To be specific, the increase in one unit of supportive school culture fostered by the principal led to an increase in the extent of teachers' curricular autonomy exercise by .233 at alpha level of .001. Likewise, the increase in one unit of supportive school culture fostered by co-workers led to an increase in the extent of teachers' curricular autonomy exercise by .137 at alpha level of .05. The direct effects of teacher-student relationship in promoting supportive school culture on teachers' current curricular autonomy exercise were not statistically significant. Additionally, there were no statistically significant effects of the school culture fostered by the principal, co-workers, and the teacher-student relationship on teachers' desired curricular autonomy exercise (DCA).

Among the two Confucian values of COL and AUT, internalization of collectivism (COL) influenced teachers' current curricular autonomy exercise (CCA) in a statistically significant way. Specifically, one unit increase for the level of internalization of collectivism led to an increase in the degree of teachers' current autonomy exercise over the curriculum by .25. There were no statistically significant effects of the internalization of authoritarianism (AUT) on teachers' desired as well as current curricular autonomy exercise.

For the associations between the two personal factors (SE and OE) and teachers' current and desired curricular autonomy exercise (CCA and DCA), one unit increase in SE significantly influenced the increase in both CCA and DCA by .27 and .278 respectively. Likewise, one unit increase in OE significantly influenced the increase in both CCA and DCA by .173 and .452

respectively. While no effects of sociocultural factors were found in relation to DCA, the two personal factors were statistically significant and had a positive influence on the same construct.

Table 5

Hypothesis Testing Results for the Final Structural Model

Hypotheses	Path	B(β)	S.E.	C.R.	*p*-value
H1	SCP → CCA	.139(.233)	.033	4.168	***
H2	SCP → DCA	-.023(-.043)	.029	-.771	.441
H3	SCC → CCA	.091(.137)	.046	1.968	.049*
H4	SCC → DCA	-.020(-.034)	.041	-.478	.633
H5	SCTS → CCA	.012(.015)	.054	.223	.823
H6	SCTS →DCA	.021(.030)	.049	.431	.666
H7	COL → CCA	.192(.250)	.054	3.862	***
H8	COL → DCA	.054(.080)	.043	1.241	.215
H9	AUT → CCA	-.006(-.009)	.041	-.150	.880
H10	AUT → DCA	-.034(-.058)	.037	-.931	.352
H11	SCP → SE	.149(.216)	.036	4.134	***
H12	SCC → SE	.021(.027)	.052	.397	.691
H13	SCTS → SE	.289(.305)	.060	4.833	***
H14	COL → SE	.037(.042)	.053	.687	.492
H15	AUT → SE	-.038(-.049)	.045	-.843	.399
H16	SCP → OE	.069(.094)	.039	1.741	.082
H17	SCC → OE	.031(.039)	.057	.547	.585
H18	SCTS → OE	.196(.195)	.065	2.980	.003**
H19	COL → AT	.084(.090)	.059	1.415	.157
H20	AUT → OE	-.144(-.174)	.051	-2.832	.005**
H21	SE → CCA	.235(.270)	.046	5.146	***
H22	SE → DCA	.210(.278)	.041	5.135	***
H23	OE → CCA	.142(.173)	.038	3.770	***
H24	OE → DCA	.323(.452)	.038	8.496	***

Note: *p<.05, **p<.01, ***p<.001

The results of the examination of the direct effects of the five sociocultural factors on teachers' self-efficacy (SE) and outcome expectation (OE) in exercising curricular autonomy indicated that the supportive school culture led by the principal (SCP) and teacher-student relationship (SCTS) statistically and positively influenced SE. Specifically, one unit increases in SCP and SCTS influenced the increase in SE by .216 and .305, respectively. The supportive school culture promoted by teacher-student relationship (SCTS) also statistically and positively influenced OE, increasing .195 of the OE with one unit increase in SCTS. However, authoritarianism (AUT) decreased .174 of the OE when one unit of it increased.

Testing of hypotheses for indirect effects. The indirect effects of teachers' self-efficacy (SE) and outcome expectancy (OE) in exercising curricular autonomy on the associations between sociocultural factors and teachers' current and desired curricular autonomy were tested with 20 hypotheses (H24-H44). The results from the bootstrapping approach indicated that eight associations mediated by each SE and OE were statistically significant at the alpha level of .05. Specifically, SE mediated the effects of SCP and SCTS on both CCA and DCA, while OE mediated the effects of SCTS and AUT on both CCA and DCA (see Table 6).

One unit increase in SE led to increases in the effects of SCP on both CCA and DCA by .058 and by .060 respectively and in the effects of SCTS on both CCA and DCA by .082 and by .085, respectively. Likewise, OE mediated the effects of SCTS on both CCA and DCA in a positive way. One unit increase in OE increased the effects of SCTS on CCA by .034 and on DCA by .088. Interestingly, OE mediated the effects of AUT on both CCA and DCA in a statistically significant manner, an outcome that was not seen in the tests of direct effects of AUT on both CCA and DCA. Specially, one unit increase in OE led to the decrease of the effects of AUT on both CCA and DCA by .030 and by .079, respectively.

Table 6

Model 2 Bootstrap Estimates of the Specific Indirect Effects of Sociocultural Factors on Curricular Autonomy Practices with Standard Errors and 95% Confidence Bounds

Hypotheses	Indirect Effect	B(***β***)	SE	95% CI	
				LB	UB
H25	SCP→SE→CCA	.035(.058)	.013	.015	.063*
H26	SCP→SE→DCA	.031(.060)	.010	.013	.054*
H27	SCP→OE→CCA	.010(.016)	.007	-.002	.025
H28	SCP→OE→DCA	.022(.042)	.014	-.004	.052
H29	SCC→SE→CCA	.005(.007)	.015	-.023	.037
H30	SCC→SE→DCA	.004(.008)	.014	-.02	.035
H31	SCC→OE→CCA	.004(.007)	.011	-.015	.028
H32	SCC→OE→DCA	.010(.018)	.024	-.031	.063
H33	SCTS→SE→CCA	.068(.082)	.023	.027	.121*
H34	SCTS→SE→DCA	.061(.085)	.019	.027	.104*
H35	SCTS→OE→CCA	.028(.034)	.013	.004	.056*
H36	SCTS→OE→DCA	.063(.088)	.025	.013	.116*
H37	COL→SE→CCA	.009(.011)	.016	-.021	.043
H38	COL→SE→DCA	.008(.012)	.015	-.018	.04
H39	COL→OE→CCA	.012(.016)	.010	-.007	.035
H40	COL→OE→DCA	.027(.041)	.023	-.015	.079
H41	AUT→SE→CCA	-.009(-.013)	.014	-.039	.018
H42	AUT→SE→DCA	-.008(-.014)	.012	-.036	.014
H43	AUT→OE→CCA	-.020(-.030)	.009	-.043	-.004*
H44	AUT→OE→DCA	-.046(-.079)	.019	-.088	-.009*

Note: *p<.05

Moderating effects of workloads. The role of workloads was also examined in relation to its effects on participating teachers' current and desired curricular autonomy exercise. There were 265 and 340 teachers for Group 1 (low workloads) and Group 2 (high workloads), respectively. The analysis indicated that there were no statistically significant differences

between the two groups ($\chi 2$=.461, df=2, p=.794). Therefore, it can be concluded that workloads did not play a significant role in teachers' current and desired degree of curricular autonomy exercise. In the following chapter, the results are further discussed in relation to theories and prior studies from cross-disciplinary perspectives.

Chapter 5: Discussion

Writing to the new president in the United States, Lieberman and Mace (2008) emphasized the critical role of a teacher as a change agent in present-day society, which keeps changing and requiring students to be equipped with new knowledge and skills:

> Teachers are on the front lines of a changing society. Teaching as telling is no longer appropriate for a knowledge society that needs students who are prepared in problem solving, adaptability, critical thinking, and digital literacies, just to name a few. (p. 226)

To keep pace with these changing needs, many societies have embarked on various educational reforms, and a number of studies tracking these reforms at the local level have pointed out that the success of reform initiatives depends on teachers' willingness to change (Zimmerman, 2006).

However, not all teachers are equally open to externally imposed innovation (Guthrie, 2012). One of the Korean scholars highlighted the critical role of teachers' perceptions towards innovation as follows:

> It is not easy to bring change into the classroom. Although countless innovation policies have been introduced to raise the level of education in schools, such top-down mandates for innovation generally fail. Numerous studies have examined why curriculum reforms fail, and one major conclusion is that an innovation's success of failure depends on how the teachers view its feasibility (Coburn, 2001; P. Kelly, 1980; Li, 1998; Markee, 1997; Wallace, 1991). No matter how important an innovation might be, its realization will be difficult if teachers in the classroom question its utility or practicality. (J. Shin, 2012, p. 542)

In addition, changes teachers make in response to educational reforms in their practices have not necessarily always been aligned with the intended direction of reform efforts, creating tensions

between policy and implementation (Agudelo-Valderrama, 2006; Evans, 1996; Jennings, 1996; Ozturk, 2012; Terhart, 2013). Therefore, it is important to examine teachers' willingness to adopt reforms promoted by educational policy makers and to identify what factors facilitate or restrain these transitions (Knight, 2009). As Silin and Schwartz (2003) assert, teacher resistance to change is not simply stubbornness or laziness, but is best understood as a form of communication that articulates "what is most salient for teachers, which dilemmas need to be addressed and if not resolved at least articulated and studied" (p. 1598).

In Korea, national curriculum reforms have historically served as the main conduit for the delivery of educational policy changes from upper administrative bodies to teachers in response to social and economic changes. As public attention increased to problems such as low student creativity—regarded as an important skill for being a competitive global citizen—low academic satisfaction, and the civic capacity of Korean citizens, a discussion developed about differentiation and diversification of curriculum and about learner-centered curriculum, and these have been emphasized in reform efforts (Lee & Park, 2014). For this reason, expanding teachers' autonomy over curriculum and encouraging them to exercise this autonomy, at both the school and the classroom level, has been a main objective of the national curriculum reforms in Korea since the 1990s and has led to the decentralizing of school governance.

In fact, autonomy is one of the major facets that characterize the professions (Bartol, 1979; Hall, 1981). Professionals, in their daily practices, enhance human well-being by making their own decisions and judgments based on specialized knowledge and skills they possess rather than unconsciously following someone else's guidelines (Biesta, 2015; Hall, 1981). Teachers exercising autonomy over curriculum is important because it means that teachers themselves function as professionals in lieu of technicians (Kristiansen, 2014; Philippou et al., 2013). Bolin

(1987) asserted, “Curriculum theorizing and development are far too important to be left only to curriculum thinkers. They are the work of teachers too, who bring to life and bring life to curriculum vision” (p. 106). Thus, teachers’ endeavors to actively interact with curricula to meet every student’s unique needs and interests is critical to nourishing learners’ growth and well-being.

Paradoxically, in the context of Korea, autonomy was given to teachers who had been accustomed to believing that their role was delivering knowledge described in curriculum materials given by these educational authorities, rather than their own will as professionals. In other words, the reform required Korean teachers to re-professionalize their positions from deprofessionalization to achieve the goals of educational reform that were linked to social needs. However, shifting teachers’ positions to professionals is a complex and multidimensional process that involves continuous negotiations between the reforming policies and teachers’ values (Philippou et al., 2014). In their interviews with elementary school teachers in Cyprus, Philippou et al. (2014) found four positions (spectator, receiver, implementer, and reformer) that the teachers crafted in the context of national curriculum reform with increased curricular autonomy, depending on the degree of the teachers’ autonomy (the lowest for the spectator and the highest for the reformer). The four positions are on a continuous spectrum and often shift, reflecting their complex and dynamic nature.

Prior studies that examined Korean teachers’ actual practices in relation to the reform policy reported that they were unwilling to adopt the reform goal of making more curricular decisions and still relied heavily on materials provided by the MOE. These findings indicate that they have remained in the positions of spectator and receiver for about two decades rather than moving across the four positions suggested by Philippou et al. (2014). To this end, this doctoral study sheds light on the immobility of the Korean teachers’ positions in relation to the national

curriculum reform that called for teachers' re-professionalization through imposed autonomy. By taking Bandura's (1986) social cognitive theory and the sociocultural approach to agency of Wertsch et al. (1993) as theoretical lenses, this doctoral study revealed how sociocultural factors promoted or constrained Korean elementary school teachers' upward mobility in their shifts toward re-professionalization. This increased autonomy over curriculum came in the context of a historically centralized education system.

Specifically, the focus of this study was the structural relationship between sociocultural and personal factors and Korean elementary school teachers' exercises of curricular autonomy. It sought to answer four research questions about the statistical association between school culture, as fostered by teachers' relationships with principals, coworkers, and students and the Confucian values of collectivism and authoritarianism, and teachers' current and desired exercises of curricular autonomy, directly and indirectly mediated by their self-efficacy and outcome expectancy. This study also investigated the moderating effects of teachers' perceived workloads on the extent of their current and desired exercises of curricular autonomy, which some qualitative studies claim was one of the factors preventing teachers from exercising their autonomy in Korea. This section summarizes the findings of the study and discusses its implications and limitations.

Findings and Implications

With sayings such as "Heaven is the work of the best and kindest men and women" (Butler, 1951, p. 55) and "Hell is other people" (Sartre, 1989, p. 190), culture in job settings—formed by interactions with the people one works with, including coworkers and employers—affects one's work productivity significantly. In the school environment, individual teachers interact with their students, coworkers, and principals the most and the interactions shape unique school cultures.

Teachers working in trustful and supportive school cultures are more likely to contribute to achieving the school's mission (Bilgic & Gumuseli, 2012).

For questions that asked for direct relationships between these three groups and for Korean teachers' perceived endeavors to achieve the reform agenda of re-positioning themselves as professionals, exercising their autonomy, and diversifying curriculum rather than sticking to curriculum materials given by the MOE, this study found that only the school principal and coworkers directly and positively influenced teachers' current exercises of curricular autonomy during the planning, implementation, and evaluation phases.

It was surprising to find that supportive teacher-student relationships did not directly lead to an increase in teachers' exercises of curricular autonomy as the other two relationships did. The ultimate outcome of teachers' exercise of their curricular autonomy valued by curriculum reformers, however, is to meet the individual student's distinctive needs and interests. Instead, supportive school cultures fostered by teacher-student relationships indirectly influenced individual teachers' exercises of both current and desired curricular autonomy mediated by self-esteem and outcome expectancy in exercising autonomy over curriculum. This finding indicates that teachers are more likely to be encouraged to adopt, initiate, and implement changes when they are imposed by educational policies for better teaching or when they are supported by their colleagues and principals, rather than the students who are the ultimate recipients of their efforts.

This finding implies that the organizational perspective is essential in promoting individual teachers to achieve the goal of national educational reform. In this study, it was evident that teachers as employees care about other adult members of the school organization significantly. This enables us to reasonably assume that if either principals or coworkers do not create a supportive environment that promotes individual teachers' endeavors to change their practices,

they will be less willing to adopt the reform ideas developed at the national policy level successful in the classrooms.

Creating a supportive school culture especially hinges on school principals. In fact, a large number of studies highlight the vital role of the school principal in developing and fostering a supportive school culture through transformational leadership, and they explain that this leadership strengthens collaboration among school members (Gurr, Drysdale, & Mulford, 2005; Hallinger, Bickman, & Davis, 1996; Sebastian & Allensworth, 2012; Youngs & King, 2002). Transformational leadership, often used interchangeably with "shared and distributed leadership," is one of the representative conceptual models in the field of educational leadership, along with instructional leadership (Hallinger, 2003). Although the definition of transformational leadership has continuously evolved and been refined by many scholars, Bennis and Nanus's (1985) illustration of it well describes a transformative school principal's relation-oriented values. According to Bennis and Nanus (1985), "There is a symbolic relationship between leaders and followers, and what makes it collective is the subtle interplay between the followers' needs and wants and the leader's capacity to understand. . .these collective aspirations" (p. 217).

For example, Leithwood and Jantzi's (1990) qualitative study of 12 exemplary schools (nine elementary and three secondary schools) located in Ontario, Canada, and their successful school improvements, found that a school principal's transformational leadership reinforced collaborative culture among school members by changing their interaction patterns. By acknowledging different values, norms, and beliefs that individual teachers might bring to the workplace, they argue that enhanced collaboration with other teachers can challenge and modify teachers' existing cognitive structures in a way that alters their actions to achieve the goals of educational reform. Similarly, Gurr et al. (2005) described two cases of principals successfully

improving school capacity—school culture and school structure—to achieve Australian educational reform agendas. In their study, they argued that transformational principals who promoted learning cultures, distributed leadership by encouraging others in the school to participate in decision-making processes, and emphasized the agency's achievements improved their schools' abilities to achieve the goals of the reforms.

The findings from this study also highlight the significant role of coworkers in creating supportive school cultures that promote individual Korean elementary school teachers' re-positioning from the left side of the spectator to the right side of the reformer in the Philippou et al. (2014) spectrum, by implementing the agenda of curriculum reform and diversifying curriculum by exercising curricular autonomy. This is consistent with findings of some studies that highlight the positive relationship between supportive coworkers and individual employees' work performances. For instance, Chiaburu and Harrison (2008) found that employees with supportive coworkers reported higher satisfaction with their jobs, more organizational commitment, and more job involvement than employees with antagonistic coworkers. In addition, Hon, Bloom, and Crant (2014) studied 608 employees in the three main industries in China and concluded that supportive coworkers are one of the most important contextual factors in lowering resistance to change and enhancing creative performance.

This positive and significant association between supportive school culture fostered by coworkers and teachers' adoption of the curriculum reform agenda may be explained by several studies that illustrate the influence of organizational subculture on employees' work-related attributes. Subcultures can be independent from their organizational cultures because of distinctively shared values, beliefs, and attributes among members in subgroups at certain organizations (Brown, 1995; Sackman, 1991; Trice & Beyer, 1993). Furthermore, Brewer (1993)

said that subcultures may be more powerful than organizational cultures in influencing individuals' work commitments when an organizational culture is not clearly communicated among its members.

A school as an organization may have multiple subcultures, including teachers' subcultures (Leithwood & Jantzi, 2000). Korean elementary school teachers are more likely to create unique subcultures depending on the students' grade levels they teach. In the context of Korea, nationally-certified elementary school teachers are responsible for teaching most of the subjects for a single grade as homeroom teachers. Therefore, they are likely to get together with the teachers who teach the same grade to understand national curriculum guidelines for the students and to share instructional ideas on what and how they need to teach the content for several subjects day-to-day.

This frequent interaction among teachers of the same grade level may contribute to the development of a unique subculture that deviates from the whole school culture and has a greater influence on individual teachers than the latter due to its better accessibility and intimacy. In fact, the occasions in which Korean elementary school teachers need to communicate with other teachers who are in charge of different grade levels are much less frequent than the interactions among the teachers who teach the same grade level, other than the interactions with teachers who are directors of certain grade levels. Reversely, these findings also provide insight as to why teachers' lack of democratic and local communication with other members of their schools has contributed to the goals of national reforms being hardly observed in real practice in Korean schools (W. Hong & Youngs, 2014; H. Park, 2012).

The Korean people's collectivist tendency, rooted in their Confucian tradition, also contributed to Korean elementary school teachers' professional re-positioning to exercising autonomy over their curricula. Specifically, teachers who had higher levels of internalization and

who valued the “views, needs, and goals of the group” (Littlewood, 1999, p. 79) more than their personal interests were more likely to exercise their curricular autonomy than those who had lower level of internalization of those values. In the context of this study, this finding can be interpreted as follows: teachers who are inclined to accede to the goals of their affiliated group—whether nation, educational district, or school—might exercise more autonomy than others because this exercise represents the common good promoted by the organization or community that provides a strong sense of belonging.

Educational policy, including the curriculum reform agenda, is developed by the MOE and processed with a top-down approach, so these teachers, as members of the Korean educational community, are trying to follow the goals of the group—that is, customizing and diversifying curriculum to meet students’ needs and interests and help them become creative and competitive global citizens—even though those teachers might not personally agree with those goals or the paths to achieve them. The result, that the level of internalization of collectivism is not statistically associated with teachers’ desired exercises of curricular autonomy, may support this interpretation.

The relationship among the level of individual teachers’ internalization of collectivism and their exercise of autonomy over curriculum mandated by educational policy found in this study support the proposal that the term ‘autonomy’ needs to be defined more broadly and to move away from the dichotomous standpoint grounded in Western individualism. While autonomy is widely understood as corresponding to independence and isolation (Littlewood, 1999), several scholars have objected and claimed that autonomy does not require a human to be alone (Jones, 1995). For example, Ryan (1991) argued that relatedness is a fundamental need of human beings alongside autonomy, and that the two are not opposed.

The finding that collectivism has a positive influence on Korean teachers' exercise of curricular autonomy not only supports Ryan's (1991) claim that relatedness promotes autonomy, but also provides the important insight that the term 'autonomy' needs to be understood in a way that reflects contextual differences. Littlewood (1999) argued that there are two types of autonomy: reactive autonomy "does not create its own directions, but once the direction has been initiated, enables learners to organize their resources autonomously in order to reach their goal" (p. 75), whereas proactive autonomy is the ability to take charge of all the learning processes, from setting objectives to achieving them. Littlewood (1999) further argued that proactive autonomy, which is well-aligned with the Western, individualistic perspective, has been viewed as the only definition of autonomy and is widely used around the globe, while reactive autonomy might be more appropriate for use in several Eastern societies that value the goals shared by the group more than those of individuals, in line with Confucian tradition.

In fact, reactive autonomy is well-suited to explain why elementary school teachers with more group-oriented tendencies exercise more autonomy over curriculum than those with lower internalization of collectivism in the context of Korea. Although the Korean curriculum reforms have increasingly emphasized the importance of teachers' discretion over curricular decisions, their proactive autonomy has remained limited because the reforms provided specific guidelines on how to use their curricular autonomy. For example, teachers could flexibly increase or decrease the number of classes mandated for each of eight subjects. Given the nature of the autonomy advocated by the MOE—in giving teachers directions to follow in exercising it—the type of autonomy that South Korean teachers are expected to exercise through the curriculum reforms can be defined as reactive autonomy. Therefore, precisely speaking, reactive autonomy could be reinforced in the context of a Confucian culture with high collectivism, and this supports the

argument as to why the term ‘autonomy’ needs to be understood from multiple perspectives, depending on varied cultural legacies.

This study also found that teachers’ self-efficacy and outcome expectancy in implementing educational changes imposed by policy in their classroom significantly influence their reported willingness to actually implement changes. Although several external and contextual factors, such as a supportive school culture fostered by school principals and coworkers and Korean people’s group orientation historically formed as a moral compass under the Confucian tradition, were found to be directly influential in teacher changes—from receiving and strictly following curriculum materials given by the MOE to exercising curricular autonomy and re-positioning themselves to be professionals in their current practices, the findings highlight that the two personal factors examined in this study influence not only teachers’ current exercise of autonomy over curriculum but also their desire and anticipation to do so in positive ways.

Korean teachers’ self-efficacy and outcome expectancy in exercising their curricular autonomy were also found to be mediators that strengthened positive statistical associations between school culture fostered by teacher-student relationships and both their current and desired exercise of curricular autonomy. However, Korean teachers’ self-efficacy and outcome expectancy in exercising their curricular autonomy mediated the statistical associations between authoritarianism and both their current and desired exercise of curricular autonomy in a negative manner. In other words, teachers who had strong self-efficacy in exercising autonomy and believed that this could have positive consequences for their professional development and their students’ learning experiences were more likely to exercise their professional autonomy over curriculum. The positive linear relationship between perceived self-efficacy and outcome expectancy and exercise of curricular autonomy supports the claim that the two constructs are personal

determinants in achieving human agency (Bandura, 1986; 1997; Hsu, Lu, Yen, & Chang, 2007; Klassen & Chiu, 2010). These findings are also consistent with the large body of studies that underscore the importance of teachers' beliefs to making educational reforms successful in practice (Evers, Brouwers, & Tomic, 2002; Handal & Herrington, 2003; McKinnon & Lamberts, 2014).

Many studies focused especially on how teachers' perceived self-efficacy in implementing the changes suggested by reform agendas influenced their adoption, or resistance to, the reform ideas. For example, in their studies with 400 primary and secondary science teachers who worked in Ohio, U.S., Czerniak and Lumpe (1996) examined how teachers' self-efficacy affected their implementation of science education reforms, from constructivism to hands-on/minds-on activities, through survey research. Adopting a multiple regression analysis, they found a strong positive association between teachers' self-efficacy and their success in implementing reform agendas. More recently, in Turkey, Cerit (2013) reported that 255 elementary school teachers with high levels of self-efficacy in the three areas of instructional strategy, classroom management, and student engagement demonstrated a higher willingness to implement the national curriculum reform guidelines, suggesting changes from teacher-centered instruction based on behaviorism to learner-centered instruction grounded in constructivism.

To the best of my knowledge, little research has been done on the statistically significant positive association between teachers' expectancy that the reform agenda would have positive consequences and their adoption of the agenda. This doctoral study is thus one of the first to take a quantitative, empirical standpoint in discussing the importance of promoting teachers' positive expectations of the consequences of curriculum reform for their practices in making it successful. However, several studies conducted outside school settings provide valuable insights into this

association. Kim and Kankanhalli (2009) reported that perceived positive value of innovation in information systems reduced users' resistance to them. In a similar vein, Hsu et al. (2007) found that individuals' personal outcome expectations, such as making friends and gaining recognition, and their community-related outcome expectations, such as achieving the community's goals or visions and growing it positively, both promoted knowledge-sharing behaviors in virtual communities. From this perspective, Korean elementary school teachers' expectations about the positive benefits of exercising curricular autonomy for both their professional development and their students' learning outcomes reduced their resistance to adopting a curriculum reform agenda that promoted teachers' curricular autonomy exercise in their practices.

Interestingly, perceived self-efficacy and outcome expectancy were both positively and significantly associated with teachers' desired and current curricular autonomy. This is in sharp contrast with the sociocultural factors, which did not explain the statistical associations with desired exercise of autonomy, even if they did for current exercise of autonomy. This finding implies that personal or intrinsic factors might be more powerful for motivating individuals to certain behaviors than environmental or extrinsic factors. This might be explained by theories that shed light on human motivation. For example, in the dual-factor theory of organizational behavior suggested by Herzberg (1966), hygiene factors, called 'dissatisfiers', minimize employee's job dissatisfaction but did not necessarily improve job satisfaction. They are mainly related to working environment with examples such as pay, policy, and interpersonal relationships between employees or supervisors (Ali, 2013). However, personal and intrinsic traits—called 'motivators' in this theory—such as achievement, growth, and recognition caused by the work itself can increase employees' job satisfaction.

Regarding the mediating effects of the two personal factors, this study provides empirical evidence supporting Wertsch et al.'s (1993) sociocultural approach to agency. The results of this doctoral study indicate that supportive school cultures fostered by teachers' relationships with principals and students positively influenced teachers' self-efficacy and outcome expectancy in exercising curricular autonomy. These school cultures also ultimately influenced their current and desired exercise of curricular autonomy, while authoritarianism, another Confucian value examined in this doctoral study, turned out to be negatively affecting teachers' self-efficacy and outcome expectancy in exercising curricular autonomy and ultimately their current and desired exercise of curricular autonomy. It is worthwhile to note that authoritarianism and supportive cultures fostered by teachers' relationships with students, which did not demonstrate direct effects on either the current or desired exercise of autonomy, did influence the outcome constructs indirectly through the two personal traits examined in the teachers.

To begin with, teachers who had supportive relationships with principals and students had higher levels of self-efficacy in exercising curricular autonomy, and this led to increases in not only current but desired exercise of autonomy. These findings can be explained by Bandura's (1997) account of the sources of improved self-efficacy. According to Bandura, mastery and vicarious experiences, social and verbal persuasion, and affective states influence self-efficacy. If one has had successful experiences with a certain task (master experiences) or has learned of others' successful experiences with it (vicarious experiences), one's self-efficacy in carrying out that task can increase. Likewise, when one takes pleasure in a task (affective state) or receives positive comments or feedback from others (social and verbal persuasion), one's self-efficacy can increase. Supportive teacher-principal and teacher-student relationships might increase teachers' chances of

having affective states or social or verbal persuasion improve their self-efficacy, which could affect their motivations and actions in exercising curricular autonomy.

The finding also indicates that teachers with supportive student relationships are more likely to believe that exercising autonomy over curriculum will improve their own professional development and their students' learning experiences, leading them to greater current and desired exercise of curricular autonomy. Although teachers are the main agents in the planning, implementation, and evaluation of classroom-level curriculum, their decisions in these three phases are highly influenced by their experiences interacting with students. Therefore, this finding can be explained by the fact that when teachers get along with their students and know more about their needs and characteristics, they are more likely to believe that their efforts to customize the curriculum will improve those students' learning experiences. This leads to teachers improving their professional knowledge and practical experiences with curricular autonomy. On the other hand, if teachers have poor relationships with their students and know little about their individual needs and interests, they might believe that customization of the curriculum would be impossible or at least unhelpful to either the students or themselves, and this may negatively influence their agency regarding curricular autonomy exercise.

In addition, Korean elementary school teachers with high levels of internalization of authoritarianism were less likely to believe that their exercise of autonomy over the curriculum would have positive consequences for their professional development or their students' learning experiences, and this decreased the likelihood of their exercise or wanting to exercise curricular autonomy. This might be because when teachers have limited chances to criticize and are forced to follow their superiors' decisions on work-related matters, they have fewer opportunities to think about wanting to exercise their own discretions and experience any positive benefits from the

exercise of autonomy. Another possibility is that these teachers perceive curriculum as a sort of Bible because it was developed by the top authority, the MOE and have limited chances to engage in social critique of their works. This explanation is supported by several criticisms of teachers' uncritical and habitual reliance on MOE-developed textbooks (Jeong, 2012). According to Hur (2012) and M. Lee (2012), many Korean teachers see curriculum as a collection of academic experiences that is deemed necessary for students because it was developed by curriculum experts, such as scholars in the relevant subject or educational authorities in government. As these teachers believe that the people who designed the curriculum are authorities in curriculum-related knowledge, they don't believe that their own exercise of curricular autonomy would improve these materials.

Lastly, many studies argue that teachers' high level of work demand significantly and negatively influences their agency to achieve the goal of educational reform in practice (Kyriacou & Chien, 2009; Lasky, 2005). In fact, many Korean scholars point out teachers' heavy workloads as one of the main causes for why they prefer to remain unchanged by adopting the agenda of reform that calls for their professional agency achievement. M. Kim (2003) is one of them, and I, as a former elementary school teacher in Korea, confirm that her following descriptions about Korean elementary school teachers' multiple roles expected are correct:

> They should be an administrator who tracks down all the reports on students' attendance and gives penalties on any violations of school or classroom regulations. They should be a counselor who provides students with individual advice on career choice and advancement to the next educational institution. They should be a school psychologist who offers clinical advice on matters such as relationship with friends, family problems, religious beliefs and values, school violence and so on. Moreover, they spend time doing a great deal of

> secretarial jobs such as making reports and various statistics tables. They should take care of keeping classrooms and school bathrooms clean and should assure lunchtime order in the classroom, where the students eat their lunch. They should lead the students in all kinds of school meetings as well as club activities. All of these are compulsory duties of Korean teachers in addition to teaching his/her subject. Therefore, these teachers have too many other duties to prepare for quality instruction. The quality of instructional materials, process of teaching, and the evaluation method is likely to be sacrificed in this situation. (M. Kim, 2003, p. 147)

Unlike most of the existing studies that reported teachers' high level of workloads as one of the factors that limit their professional capacity as educators, this study found that teachers' workloads did not significantly influence their agency to achieve the goal of curriculum reform in Korea. Therefore, this doctoral study suggests that the considerations of sociocultural and personal factors examined herein, need to be valued more than the endless blame on teachers' workloads in terms of teachers' preferences to remain unchanged.

Limitations of the Study

Although this study has offered valuable insights into teachers' adoption of curriculum reform agendas and their curricular autonomy in particular, it has several limitations. First, the survey data consisted of teachers' self-reported responses, which leaves the possibility of discrepancies between teachers' self-perceptions and actions. For example, teachers who do not exercise curricular autonomy at a high level in their practice might have marked 'high' in their surveys because they did not want to look unprofessional through not carrying out the national reform agenda. In addition, individual teachers might have different perceptions toward each unit

of the 4-point, Likert scale. Specifically, the 'high' level of curricular autonomy exercise that one teacher perceives for his or her practice might be regarded as 'very high' or 'low' by other teachers.

Second, the responses of teachers in the survey questionnaires with regard to their curricular autonomy exercise might not have been solely explained by the sociocultural and personal factors examined in this doctoral study. Demographic factors such as school size and teachers' teaching experience, gender, and positions as well as students' academic attainments were not controlled. Several studies that were reviewed for this doctoral study addressed the idea that teaching experiences could play a role in predicting to what extent teachers will exercise their professional autonomy over curriculum (Borko & Livingston, 1989; Liston et al., 2006). In addition, a Korean scholar, H. Park (2012) indicated that teachers' positions in their schools influence their autonomy exercise for school-wide curriculum.

Third, this study examined only the effects of sociocultural and personal factors on teachers' exercise of curricular autonomy and the sociocultural factors' effects on the personal factors. According to the SCT (Bandura, 1986; 1997), the environmental, personal, and behavioral determinants influence each other bidirectionally; that is, teachers' exercise of autonomy is affected by sociocultural and personal factors, which in turn are influenced by their exercise of autonomy. This doctoral study does not investigate the reverse directions. Specifically, how school culture and teachers' self-efficacy and outcome expectancy in exercising curricular autonomy are influenced by teachers' current or desired curricular autonomy exercise or how teachers' self-efficacy or outcome expectancy influence their relationships with principals, co-workers, and students were not examined through this doctoral study.

Implications for Practice

According to the findings and discussion of this doctoral study, the following practical strategies are recommended to facilitate Korean elementary school teachers' agency achievement with regard to curricular autonomy exercise. First, organizational efforts are needed to nourish supportive and democratic working environments rather than antagonistic and authoritative ones. For example, school principals need to increase their opportunities to directly interact with individual teachers through multiple informal channels, such as having regular tea times with teachers, in order to develop and demonstrate transformative and relation-oriented leadership. Several educational studies conducted in the context of Korea addressed the idea that teachers' perceptions toward the school principals' leadership are highly related to the frequency of their communication (W. Lee, 2008; S. Kim, 1999; Yu, 2017). In fact, some studies pointed to the lack of interaction between school principals and individual teachers not in administrative positions, such as the head teachers for each department, grade, or school-wide project, as the primary barrier to principals understanding teachers' concerns and professional needs and demonstrating effective leadership (S. Kim, 1999; S. Lee & Gyeong, 2001; Yu, 2017).

In addition, school principals' frequent communication with individual teachers can also facilitate the process of sharing the visions and goals of the schools or certain initiatives that the school principals want to pursue. Given that Korean elementary school teachers who had a high level of internalization for collectivism were more likely to exercise curricular autonomy, school principals holding frequent conversations regarding the national curriculum reform agenda of diversifying curriculum to meet students' various needs and interests could help teachers to understand this as the important mission of the schools. In a similar vein, with increased interaction with teachers, school principals will be able to have more chances to give each teacher verbal persuasion for their practices regarding curricular autonomy exercise, which was pointed out as

one of the sources for improving teachers' self-efficacy by Bandura (1997).

Co-workers must try to create supportive and collaborative subcultures that respect and facilitate their members' free exchange of thoughts. Newcomers in a subgroup such as beginning teachers or teachers transferred from other schools particularly need support for learning about the insiders' culture and collaboration for implementing innovative instructions such as diversifying curriculum (Conderman & Johnston-Rodriguez, 2009). To reduce the deviation between organizational culture and subcultures and make them go hand-in-hand to achieve the goals of the schools, efforts to promote democratic and local communication with school members outside of teachers' subgroups through various opportunities like holding weekly whole employee meetings or operating special-interest groups are necessary, as they could increase shared understanding of the goals and shared responsibility for carrying out curriculum reform agendas.

It is also important to help teachers develop and improve their self-efficacy and outcome expectancy in exercising curricular autonomy in order to promote their current and desired exercise of curricular autonomy for diversifying curriculum. Referring to Bandura's (1999) four sources of self-efficacy, ample opportunities for teachers to have mastery and vicarious experiences should be provided. For example, to provide master experiences, those teachers who are recognized as the ones with the best practices of diversifying curriculum can serve as mentors and consult mentees' concerns or difficulties with regard to their practices of effectively exercising curricular autonomy from the phases of planning to evaluation. Schools or districts can also offer various professional events that share teachers' best practices of exercising curricular autonomy such as teachers' contests, conferences, and retreats. It is also important to encourage teachers to develop supportive relationships with students and get to know each individual student's needs and interests. Offering frequent one-on-one meeting opportunities with each student or implementing various forms of

formative assessments could help teachers learn about their students more deeply and devise personalized approaches to support their learning experiences. Teacher educators also have to make intentional and systematic efforts to help pre-service teachers develop their self-efficacy and expect positive outcomes of exercising curricular autonomy instead of sticking to curriculum materials such as textbooks and teachers' guides by creating courses that focus on diversifying curriculum for students with various backgrounds and interests. The teacher educators can also design curricula for the required field experiences in ways that allow pre-service teachers to actually implement what they learned from the courses regarding how to diversify curriculum in practice.

Suggestions for Future Research

Considering the limitations identified above, quantitative research that investigates the role of demographic factors on the influences of sociocultural or personal factors on teachers' curricular autonomy exercise is suggested. For example, investigations with regard to what extent the school culture or personal factors influence novice and experienced teachers' curricular autonomy exercise separately and whether the two groups' practices demonstrate significant differences will contribute to the line of inquiry regarding teacher agency achievement in relation to educational change.

In addition, moving beyond school culture and the two Confucian values examined in this doctoral study, other sociocultural factors that are often mentioned as barriers that prevent Korean teachers from implementing new changes in their classrooms, such as exam-oriented culture, credentialism, and parents' perceptions of the role of education and success in life, are worthwhile to examine in relation to teachers' adoption of reform agendas. Furthermore, qualitative research through observation, and interviews will be able to provide a more accurate and comprehensive

picture of how teachers exercise their curricular autonomy in practice and of the reasons why the sociocultural and personal factors examined in this doctoral study were positively or negatively related; it will do so by overcoming the limitations of surveys with self-reported responses. Finally, longitudinal surveys could be undertaken to examine the interactive relationships among the three reciprocal determinants of sociocultural factors, personal factors, and teachers' exercise of curricular autonomy in order to examine Bandura's sociocultural theory.

Conclusion

This doctoral study provides valuable insights into the factors behind school teachers' exercise of autonomy over curriculum and implies conditions for and effective ways of promoting the implementation of curriculum reform agendas in Korea. The findings suggest the importance of considering both sociocultural and personal factors when promoting teachers' agency for achieving curriculum reform goals. In particular, this study sheds light on the need to view teacher agency in relation to educational reform from organizational perspectives. Teachers are more likely to adopt a reform agenda when they are supported by their school principals and colleagues. In addition, this study also suggests the importance of understanding teacher agency in relation to the dominant culture in the teachers' society. Korean teachers' internalization of the Confucian values of collectivism and authoritarianism as the traditional moral guidelines of society both facilitated and constrained their exercise of curricular autonomy, the major goal of the curriculum reform. This finding underscores the need to redefine the term 'autonomy' in light of distinctive contextual characteristics. Lastly, this study emphasizes the importance of creating many opportunities to develop and improve teachers' self-efficacy and outcome expectancy in exercising curricular autonomy.

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Appendices

Appendix A: [Pilot Study] Components of Survey Instrument

Part	Construct	Item Number
I	Current Curricular Autonomy	1-16
	Desired Curricular Autonomy	17-32
II	Self-efficacy for exercising curricular autonomy	33-42
	Attitudes towards curricular autonomy exercise	43-48
III	School culture led by principal	49-53
	School culture led by co-workers	54-58
	School culture led by teacher-student relationship	59-63
	Collectivism	64-67
	Authoritarianism	68-71
	Workloads	72-74
IV	Gender	75
	Position	76
	Teaching experience	77
	Education level	78
	School type	79
	School size	80

Region	81
Current teaching grades	82

Appendix B: [Pilot Study] Survey Instrument

Survey for influential factors that contribute to South Korean elementary school teachers' perceptions of curricular autonomy exercise

Greetings,

We appreciate your invaluable efforts to be leaders for the improvement of South Korea elementary education. We developed this survey questionnaire to find implications that could support your teaching practices. Specifically, the purpose of this survey is to explore South Korean elementary school teachers' perceptions of curricular autonomy exercise and factors that might influence them. Your responses will be kept strictly confidential and only used for the purpose of this research. Please provide your thoughts on each item in the survey candidly. Your participation is greatly appreciated.

Professor: Ph.D. Patricia Kubow, Researcher: Mina Min
Majors in Curriculum Studies
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Ⅰ. Perceptions of Current and Desired Degree of Curricular Autonomy Exercise

❖The following questions (1-16) are asking your thoughts on your current degree of curricular autonomy exercise in the phases of curriculum planning, implementation, and evaluation. Please mark one that best describes your experiences and beliefs.

The Degree of Curricular Autonomy Exercise	**Current** Degree of Curricular Autonomy Exercise			
	Very Low	Low	High	Very High
1. Setting goals or objectives of school				
2. Allocating time for each subject				
3. Setting objectives for each subject				

4. Allocating time for the sub-sections of “Creative Experience Activities”				
5. Incorporating new subjects into school curriculum				
6. Annual planning for school-wide events, holidays, and vacations				
7. Setting objectives or adjusting time allocation for each period of all subjects you teach				
8. Adding, modifying or deleting content in curriculum for each subject				
9. Developing and implementing your own teaching methods or strategies				
10. Deciding what to teach for each sub-section of the curriculum of “Creative Experience Activities”				
11. Selecting textbooks for subjects you teach				
12. Selecting, modifying, or developing teaching materials for your own classes				
13. Utilizing human resources or materials in or outside of schools				
14. Determining what to evaluate for assessing students’ academic performance				
15. Determining when, how, or with what to evaluate students’ academic performance				
16. Determining how to apply the assessment results of students’ academic performance				

❖The following questions (17-32) are asking your thoughts on your desired degree of curricular autonomy exercise in the phases of curriculum planning, implementation, and evaluation. Please mark one that best describes your experiences and beliefs.

The Degree of Curricular Autonomy Exercise	**Desired** Degree of Curricular Autonomy Exercise			
	Very Low	Low	High	Very High
17. Setting goals or objectives of school				
18. Allocating time for each subject				
19. Setting objectives for each subject				
20. Allocating time for the sub-sections of “Creative Experience Activities”				
21. Incorporating new subjects into school curriculum				
22. Annual planning for school-wide events, holidays, and vacations				
23. Setting objectives or adjusting time allocation for each period of all subjects you teach				
24. Adding, modifying or deleting content in curriculum for each subject				

25. Developing and implementing your own teaching methods or strategies				
26. Deciding what to teach for each sub-section of the curriculum of "Creative Experience Activities"				
27. Selecting textbooks for subjects you teach				
28. Selecting, modifying, or developing teaching materials for your own classes				
29. Utilizing human resources or materials or outside of schools				
30. Determining what to evaluate for assessing students' academic performance				
31. Determining when, how, or with what to evaluate students' academic performance				
32. Determining how to apply the assessment results of students' academic performance				

II. Personal Factors

❖The following questions (33-42) are asking your self-efficacy for exercising curricular autonomy in the phases of curriculum planning, implementation, and evaluation. Please mark one that best describes your thoughts.

Your Self-Efficacy for the Following:	Very Low	Low	High	Very High
33. Comprehending guidelines suggested on national curriculum for subjects				
34. Comprehending school- or grade-wide curricula for subjects				
35. Designing curricula of subjects for your class				
36. Reconstructing curriculum of subjects for your class				
37. Implementing curriculum of subjects in your class				
38. Implementing curriculum of "Creative Experience Activities"				
39. Developing instruments for assessing students' academic performance on subjects				
40. Evaluating students' academic performance on subjects				
41. Experience Activities of "Creative Experience Activities"				
42. Applying changes based on the results of an assessment				

❖The following questions (43-48) are asking your attitudes to curricular autonomy exercise. Please mark one that best describes your thoughts.

Attitudes to Curricular Autonomy Exercise	Strongly Disagree	Disagree	Agree	Strongly Agree
43. I believe that teachers exercising curricular autonomy would enhance their				

understandings on what the national curriculum suggests for teaching.				
44. I believe that teachers exercising curricular autonomy would enhance their *professional knowledge* needed for better exercising curricular autonomy in the future.				
45. I believe that teachers exercising curricular autonomy would improve their *practical experiences* needed for better exercising curricular autonomy in the future.				
46. I believe that teachers exercising curricular autonomy would improve *students' academic engagement*.				
47. I believe that teachers exercising curricular autonomy would improve *students' academic achievements*.				
48. I believe that teachers exercising curricular autonomy would be able to make curricula more appropriate for students of varying socio-economic circumstance.				

III. Sociocultural Factors and Perceived Workloads

❖The following questions (49-74) are asking your perceptions of sociocultural factors that might influence South Korean elementary school teachers' perceived degree of current and desirable curricular autonomy and the level of workloads. Please mark one that best describes your thoughts.

School Culture	Strongly Disagree	Disagree	Agree	Strongly Agree
49. At my school teachers actively interact with principals.				
50. At my school teachers actively cooperate with teachers of department head for their works.				
51. At my school the principal understands teachers' concerns well.				
52. At my school the principal lets each department deal with their work autonomously once he sets general guidelines for them.				
53. At my school the principal supports teachers in a way that creates an environment in which they feel comfortable working.				
54. At my school teachers trust each other.				

55. At my school teachers cooperate with each other for school events or community-wide activities in which our school is involved.				
56. At my school teachers' behavior leads to factionalism among co-workers.				
57. At my school teachers tend to identify and/or exploit other co-workers' weaknesses.				
58. At my school teachers argue about small issues.				
59. At my school teachers understand the characteristics of their students well.				
60. At my school teachers encourage students with words of praise.				
61. At my school teachers interact in a friendly and positive manner with their students.				
62. At my school teachers get along well with their students.				
63. At my school, teachers respect students' thoughts and opinions.				
Confucian Culture	Strongly Disagree	Disagree	Agree	Strongly Agree
64. In our society, the benefit of the common good is valued higher than individual values.				
65. My own success is dependent on the success of those around me.				
66. I would freely put aside my own needs for the needs of the group.				
67. My rights may be limited if it is needed for promoting common good.				
68. In our society, hierarchical relationships among co-workers is essential for maintaining and managing any organization.				
69. All family members should respect the male head of household.				
70. The presence of a social class system is necessary for maintaining social order.				
71. Subordinate staff members should respect the decisions of their superiors as much as possible.				
The level of workloads	Strongly Disagree	Disagree	Agree	Strongly Agree
72. I feel that I have to deal with too much administrative works.				
73. I feel that my teaching workload is too heavy.				

74. Our school has many extracurricular activities that are not directly related to our school curriculum.				

IV. Demographic Information

75. Gender	1) Male	2) Female
76. Position	1) Department head teacher 3) Subject teacher	2) Homeroom teacher 4) Other teacher (school health, nutrition, special education, temporary teachers, etc.)
77. Teaching Experiences	1) Less than 5 years 3) 10 – 14 years 5) More than 20 years	2) 5 – 9 years 4) 15 – 20 years
78. Education	1) Bachelor's degree 3) Master degree 5) Doctoral degree	2) Working for Master degree 4) Working for Doctoral degree
79. School type	1) National/Public school	2) Private school
80. School size	1) 1-6 classes 3) 19-25 classes	2) 7-18 classes 4) More than 25 classes
81. Region	1) Seoul 3) Gyeonggi-do 5) Others	2) Incheon 4) Dague
82. Current Teaching Grade (Please choose <u>ALL</u> that apply)	1) 1st grade 3) 3rd grade 5) 5th grade	2) 2nd grade 4) 4th grade 6) 6th grade

Appendix C: [Pilot Study] Factors Extracted and Number of Corresponding Items

Factor Number	Factor Name	The Number of Items
1	Current curricular autonomy for plan	6
2	Current curricular autonomy for implementation	5
3	Current curricular autonomy for evaluation	2
4	Desired curricular autonomy for plan	5
5	Desired curricular autonomy for operation	9
6	Self-efficacy for exercising curricular autonomy	10
7	Attitudes towards curricular autonomy exercise	6
8	Supportive school culture led by principal	4
9	Supportive school culture led by co-workers	3
10	Supportive school culture led by teacher-student relationship	5
11	Collectivism	4
12	Authoritarianism	4
13	Workloads	3

Appendix D: [Pilot Study] Factor Loadings for EFA, Variances, & Alpha

Item	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.798												
2	.834												
3	.727												
4	.804												
5	.789												
6	.622												
7		.815											
8		.757											
9		.817											
12		.740											
14			.846										
15			.947										
16			.786										
17				.808									
18				.796									
19				.869									
20				.537									
21				.636									
23					.624								
24					.678								
25					.813								
26					.603								
28					.856								
29					.784								
30					.855								
31					.892								

32	.845											
33		.613										
34		.688										
35		.790										
36		.699										
37		.768										
38		.756										
39		.786										
40		.834										
41		.745										
42		.795										
43			.772									
44			.843									
45			.811									
46			.819									
47			.803									
48			.089									
49				.871								
51				.936								
52				.839								
53				.943								
56					.931							
57					.907							
58					.941							
59						.832						
60						.947						
61						.982						
62						.902						
63						.893						
64							.583					
65							.759					
66							.872					
67							.798					
68								.707				
69								.758				
70								.952				
71								.869				
72									.808			
73									.769			

74													.740
Eigenvalue	5.507	2.588	1.378	7.050	2.007	5.624	3.936	6.595	2.453	1.890	3.818	1.379	1.791
% of total variance	34.417	16.178	8.614	44.063	12.544	56.245	65.596	43.964	16.357	12.600	47.721	17.240	59.708
% of cumulative variance	34.417	50.595	59.210	44.063	56.607	56.245	65.596	43.964	60.321	72.921	47.721	64.960	59.708
Alpha	.880	.760	.832	.901	.800	.914	.889	.934	.902	.913	.854	.764	.650

Appendix E: [Primary Study] Complete List of Questionnaires by Constructs

Constructs		Item	Number	Scale
Current and Desired Curricular Autonomy (CCA/DCA)	Plan (CCP/DCP)	Setting goals or objectives for school	1/18	4 points: (Very Low – Low – High – Very High)
		Allocating time for each subject	2/19	
		Setting objectives for each subject	3/20	
		Allocating time for the sub-sections of *Creative Experience Activities*	4/21	
		Incorporating new subjects into the school curriculum	5/22	
		Annual planning for school-wide events, holidays, and vacations	6/23	
	Implementation (CCI/DCI)	Setting objectives for each period in all the subjects you teach	7/24	
		Adjusting time allocated for each period in all the subjects you teach	8/25	
		Adding, modifying, or deleting content to the curriculum for each subject	9/26	
		Developing and implementing your own teaching methods and strategies	10/27	
		Deciding what to teach for each sub-section of the curriculum of *Creative Experience Activities*	11/28	
		Selecting textbooks for subjects you teach	12/29	
		Using human resources or materials in or outside of school	13/30	
		Determining what to evaluate when assessing students' academic performances	14/31	
	Evaluation (CCE/DCE)	Determining when to evaluate students' academic performances	15/32	
		Determining how or with what to evaluate students' academic performances	16/33	
		Determining how to apply the results of assessments of students' academic performances	17/34	

Personal Factors	Self-efficacy in exercising curricular autonomy (SE)	Comprehending the suggested guidelines on national curricula for subjects	35	4 points (Very Low – Low – High – Very High)
		Comprehending school-wide curricula for subjects	36	
		Comprehending grade-wide curricula for subjects	37	
		Setting objectives for each period in all subjects you teach	38	
		Adjusting time allocation for each period in all subjects you teach	39	
		Selecting appropriate content to teach in each subject to help students achieve class objectives	40	
		Adding, modifying, or deleting contents from the curriculum for each subject to help students achieve class objectives	41	
		Implementing a curriculum for the subjects in your class	42	
		Developing instruments for assessing students' academic performance in each subject	43	
		Evaluating students' academic performance in each subject	44	
		Applying changes based on the results of an assessment	45	
	Outcome Expectancy in Exercising Curricular Autonomy (OE)	I believe that teachers exercising curricular autonomy will enhance their understanding of what the national curriculum suggests for teaching.	46	4 points: (Strongly Disagree – Disagree – Agree – Strongly Agree)
		I believe that teachers exercising curricular autonomy would enhance the *professional knowledge* they need for better exercising their curricular autonomy in the future.	47	
		I believe that teachers exercising curricular autonomy would gain the *practical experience* they need for better exercising curricular autonomy in the future.	48	
		I believe that teachers exercising curricular autonomy would	49	

		improve *students' academic engagement*.		
		I believe that teachers exercising curricular autonomy would improve *students' academic achievements*.	50	
		I believe that teachers exercising curricular autonomy would be able to make curricula more appropriate for students of varying socioeconomic circumstances.	51	
School Culture (SC)	School Culture Fostered by Principal (SCP)	At my school, teachers actively interact with the principal.	52	4 points: (Strongly Disagree – Disagree – Agree – Strongly Agree)
		At my school, the principal respects the teachers.	53	
		At my school, the principal understands teachers' concerns well.	54	
		At my school, the principal lets each department deal with its work autonomously once he sets general guidelines for them.	55	
		At my school, the principal supports teachers in a way that creates an environment in which they feel comfortable working.	56	
	School Culture Fostered by Coworkers (SCC)	At my school, teachers share their concerns regarding their work.	57	4 points: (Strongly Disagree – Disagree – Agree – Strongly Agree)
		At my school, teachers share their concerns regarding their students.	58	
		At my school, teachers try to help resolve other teachers' concerns.	59	
		At my school, teachers cooperate with each other for school events.	60	
		At my school, teachers' behaviors do not lead to factionalism among co-workers.	61	
		At my school, teachers do not tend to identify and exploit their co-workers' weaknesses.	62	
		At my school, teachers do not argue about small issues.	63	
	School Culture Fostered by	At my school, teachers understand the characteristics of their students well.	64	4 points: (Strongly Disagree –

	Teacher and Students (SCTS)	At my school, teachers encourage students with words of praise.	65	Disagree – Agree – Strongly Agree)
		At my school, teachers interact in a friendly and positive manner with their students.	66	
		At my school, teachers get along well with their students.	67	
		At my school, teachers respect students' thoughts and opinions.	68	
Confucian Values (CV)	Collectivism (COL)	In our society, the benefit of the common good is valued more highly than individual values.	69	4 points: (Strongly Disagree – Disagree – Agree – Strongly Agree)
		My own success depends on the success of those around me.	70	
		I would freely put aside my own needs for the needs of the group.	71	
		My rights may be limited if this is needed for promoting the common good.	72	
	Authoritarianism (AUT)	In our society, hierarchical relationships among co-workers are essential for maintaining and managing any organization.	73	4 points: (Strongly Disagree – Disagree – Agree – Strongly Agree)
		All family members should respect the male head of the household.	74	
		The presence of a social class system is necessary for maintaining social order.	75	
		Subordinate staff members should respect the decisions of their superiors as much as possible.	76	
	Workloads (WKL)	I feel that the work related to manage my class takes me a lot of time to accomplish.	77	4 points: (Strongly Disagree – Disagree – Agree – Strongly Agree)
		I feel that my teaching workload is too heavy.	78	
		I feel that school-wide works assigned to me take me a lot of time to accomplish.	79	
		I feel that a wide range of school events take me a lot of time to accomplish.	80	
		I feel that I have to deal with too much administrative work.	81	

	Our school has many events that are not directly related to our curriculum.	82

Appendix F: [Primary Study] Survey Instrument

Survey of South Korean Elementary School Teachers' Perceptions of Professional Curricular Autonomy

Greetings,

We appreciate your invaluable efforts to be leaders in the improvement of South Korean elementary education. We developed this survey questionnaire to find implications that could support your teaching practices. Specifically, the purpose of this survey is to explore South Korean elementary school teachers' perceptions of the exercise of curricular autonomy and factors that might influence it. Your responses will be kept strictly confidential and used only for the purpose of this research. Please provide your thoughts on each item in the survey candidly. Your participation is greatly appreciated.

Note: If you have already participated in the pilot survey titled "Influential factors that contribute to South Korean elementary school teachers' perceptions of curricular autonomy exercise," online, please do not participate in this survey.

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Perceptions of Current and Desired Degrees of Curricular Autonomy

The following questions (1–34) ask for your thoughts on your current and desired degrees of curricular autonomy in the phases of curriculum planning, implementation, and evaluation. Please mark the one that best describes your experiences and thoughts.

Current Curricular Autonomy

Degree of Curricular Autonomy	**Current** Degree of Curricular Autonomy			
	Very Low	Low	High	Very High
1. Setting goals or objectives for school				
2. Allocating time for each subject				
3. Setting objectives for each subject				
4. Allocating time for the sub-sections of "Creative Experience Activities"				
5. Incorporating new subjects into the school curriculum				
6. Annual planning for school-wide events, holidays, and vacations				

7. Setting objectives for each period in all the subjects you teach				
8. Adjusting time allocated for each period in all the subjects you teach				
9. Adding, modifying, or deleting content to the curriculum for each subject				
10. Developing and implementing your own teaching methods and strategies				
11. Deciding what to teach for each sub-section of the curriculum of "Creative Experience Activities"				
12. Selecting textbooks for subjects you teach				
13. Using human resources or materials in or outside of school				
14. Determining what to evaluate when assessing students' academic performances				
15. Determining when to evaluate students' academic performances				
16. Determining how or with what to evaluate students' academic performances				
17. Determining how to apply the results of assessments of students' academic performances				

Desired Curricular Autonomy

Degree of Curricular Autonomy	**Desired** Degree of Curricular Autonomy			
	Very Low	Low	High	Very High
18. Setting goals or objectives for school				
19. Allocating time for each subject				
20. Setting objectives for each subject				
21. Allocating time for the sub-sections of "Creative Experience Activities"				
22. Incorporating new subjects into the school curriculum				
23. Annual planning for school-wide events, holidays, and vacations				
24. Setting objectives for each period in all the subjects you teach				
25. Adjusting time allocated for each period in all the subjects you teach				
26. Adding, modifying, or deleting content to the curriculum for each subject				
27. Developing and implementing your own teaching methods and strategies				

28. Deciding what to teach for each sub-section of the curriculum of "Creative Experience Activities"				
29. Selecting textbooks for subjects you teach				
30. Using human resources or materials in or outside of school				
31. Determining what to evaluate when assessing students' academic performances				
32. Determining when to evaluate students' academic performances				
33. Determining how or with what to evaluate students' academic performances				
34. Determining how to apply the results of assessments of students' academic performances				

II. Teachers' Perceptions of Personal Factors

II-1. The following questions (35–45) ask about your perceptions of your level of capability in exercising curricular autonomy. Please mark the one that best describes your thoughts.

Your Perceived Level of Capability for the Following:	Very Low	Low	High	Very High
35. Comprehending the guidelines suggested on national curricula for subjects				
36. Comprehending school-wide curricula for subjects				
37. Comprehending grade-wide curricula for subjects				
38. Setting objectives for each period in all subjects you teach				
39. Adjusting time allocation for each period in all subjects you teach				
40. Selecting appropriate content to teach in each subject to help students achieve class objectives				
41. Adding, modifying, or deleting contents from the curriculum for each subject to help students achieve class objectives				
42. Implementing a curriculum of subjects in your class				
43. Developing instruments for assessing students' academic performances in each subject				
44. Evaluating students' academic performance in each subject				
45. Applying changes based on the results of an assessment				

II-2. The following questions (46–51) ask about your perceptions of your level of capability in exercising curricular autonomy. Please mark the one that best describes your thoughts.

Your Beliefs about Benefits of Exercising Curricular Autonomy	Strongly Disagree	Disagree	Agree	Strongly Agree
46. I believe that teachers exercising curricular autonomy would enhance their understanding of what the national curriculum suggests for teaching.				
47. I believe that teachers exercising curricular autonomy would enhance the *professional knowledge* they need for better exercising their curricular autonomy in the future.				
48. I believe that teachers exercising curricular autonomy would gain the *practical experiences* they need for better exercising curricular autonomy in the future.				
49. I believe that teachers exercising curricular autonomy would improve *students' academic engagement*.				
50. I believe that teachers exercising curricular autonomy would improve *students' academic achievements*.				
51. I believe that teachers exercising curricular autonomy would be able to make curricula more appropriate for students of varying socio-economic circumstance.				

III. Teachers' Perceptions on Sociocultural Factors

❖The following questions (52–82) ask about your perception of sociocultural factors that might influence South Korean elementary school teachers' perceived levels of current and desirable degrees of curricular autonomy. Please mark the one that best describes your thoughts.

School Culture	Strongly Disagree	Disagree	Agree	Strongly Agree
52. At my school, teachers actively interact with principals.				
53. At my school, the principal respects the teachers.				
54. At my school, the principal understands teachers' concerns well.				
55. At my school, the principal lets each department deal with its work autonomously once he sets general guidelines for them.				
56. At my school, the principal supports teachers in a way that creates an environment in which they feel comfortable working.				

57. At my school, teachers share their concerns regarding their work.				
58. At my school, teachers share their concerns regarding their students.				
59. At my school, teachers try to help resolve other teachers' concerns.				
60. At my school, teachers cooperate with each other for school events.				
61. At my school, teachers' behaviors do not lead to factionalism among co-workers.				
62. At my school, teachers do not tend to identify and exploit their co-workers' weaknesses.				
63. At my school, teachers do not argue about small issues.				
64. At my school, teachers understand the characteristics of their students well.				
65. At my school, teachers encourage students with words of praise.				
66. At my school, teachers interact in a friendly and positive manner with their students.				
67. At my school, teachers get along well with their students.				
68. At my school, teachers respect students' thoughts and opinions.				
Confucian Culture				
69. In our society, the benefit of the common good is valued more highly than individual values.				
70. My own success depends on the success of those around me.				
71. I would freely put aside my own needs for the needs of the group.				
72. My rights may be limited if this is needed for promoting the common good.				
73. In our society, hierarchical relationships among co-workers are essential for maintaining and managing any organization.				
74. All family members should respect the male head of household.				
75. The presence of a social class system is necessary for maintaining social order.				
76. Subordinate staff members should respect the decisions of their superiors as much as possible.				
Perceived Level of Workload				

77. I feel that the works related to manage my class take me a lot of time to accomplish.				
78. I feel that my teaching workload is too heavy.				
79. I feel that school-wide works assigned to me take me a lot of time to accomplish.				
80. I feel that a wide range of school events take me a lot of time to accomplish.				
81. I feel that I have to deal with too much administrative work.				
82. Our school has many events that are not directly related to our curriculum.				

IV. Demographic Information

❖The following questions (83-91) are asking your demographic information. Please mark one that best describes you.

83.	Gender	1) Male	2) Female
84.	Position (Please choose ALL that aply)	1) Department head teacher 3) Subject teacher	2) Homeroom teacher 4) Other teacher (school health, nutrition, special education, temporary teachers, etc.)
85.	Teaching Experiences	1) Less than 2 years 3) 5 – 19 years 5) More than 20 years	2) 2 – 4 years 4) More than 20 years
86.	Education	1) Bachelor's degree 3) Master degree 5) Doctoral degree	2) Working for Master degree 4) Working for Doctoral degree
87.	School Type	1) National/Public school	2) Private school
88.	School Size	1) 1-6 classes 3) 19-25 classes	2) 7-18 classes 4) More than 25 classes
89.	Region	1) Seoul 3) Dague	2) Gyeonggi-do / In-cheon 4) Others ( )
90.	Current Teaching Grade (Please choose ALL that apply)	1) 1st grade 3) 3rd grade 5) 5th grade	2) 2nd grade 4) 4th grade 6) 6th grade

Appendix G: [Primary Study] Means and Standard Deviations by Each Survey Item

No.	Survey Item	Min.	Max.	M	S.D.
1	[CCA] Setting goals or objectives for school	1	4	2.13	.818
2	[CCA] Allocating time for each subject	1	4	2.11	.884
3	[CCA] Setting objectives for each subject	1	4	2.27	.848
4	[CCA] Allocating time for the sub-sections of "Creative Experience Activities"	1	4	2.35	.865
5	[CCA] Incorporating new subjects into the school curriculum	1	4	1.83	.827
6	[CCA] Annual planning for school-wide events, holidays, and vacations	1	4	2.31	.875
7	[CCA] Setting objectives for each period in all the subjects you teach	1	4	3.06	.772
8	[CCA] Adjusting time allocated for each period in all the subjects you teach	1	4	3.15	.760
9	[CCA] Adding, modifying, or deleting content to the curriculum for each subject	1	4	2.92	.829
10	[CCA] Developing and implementing your own teaching methods and strategies	1	4	3.28	.735
11	[CCA] Deciding what to teach for each sub-section of the curriculum of "Creative Experience Activities"	1	4	2.75	.856
12	[CCA] Selecting textbooks for subjects you teach	1	4	2.56	.909
13	[CCA] Using human resources or materials in or outside of school	1	4	2.77	.803
14	[CCA] Determining what to evaluate when assessing students' academic performances	1	4	3.10	.781
15	[CCA] Determining when to evaluate students' academic performances	1	4	2.77	.894
16	[CCA] Determining how or with what to evaluate students' academic performances	1	4	2.94	.842
17	[CCA] Determining how to apply the results of assessments of students' academic performances	1	4	3.03	.815
18	[DCA] Setting goals or objectives for school	1	4	2.75	.696
19	[DCA] Allocating time for each subject	1	4	2.88	.694
20	[DCA] Setting objectives for each subject	1	4	2.82	.719
21	[DCA] Allocating time for the sub-sections of "Creative Experience Activities"	1	4	3.08	.662
22	[DCA] Incorporating new subjects into the school curriculum	1	4	2.73	.812
23	[DCA] Annual planning for school-wide events, holidays, and vacations	1	4	3.09	.677

24	[DCA] Setting objectives for each period in all the subjects you teach	1	4	3.31	.637
25	[DCA] Adjusting time allocated for each period in all the subjects you teach	1	4	3.33	.639
26	[DCA] Adding, modifying, or deleting content to the curriculum for each subject	1	4	3.30	.609
27	[DCA] Developing and implementing your own teaching methods and strategies	1	4	3.40	.613
28	[DCA] Deciding what to teach for each sub-section of the curriculum of "Creative Experience Activities"	1	4	3.26	.635
29	[DCA] Selecting textbooks for subjects you teach	1	4	3.14	.682
30	[DCA] Using human resources or materials in or outside of school	1	4	3.36	.605
31	[DCA] Determining what to evaluate when assessing students' academic performances	1	4	3.43	.590
32	[DCA] Determining when to evaluate students' academic performances	1	4	3.36	.647
33	[DCA] Determining how or with what to evaluate students' academic performances	1	4	3.39	.593
34	[DCA] Determining how to apply the results of assessments of students' academic performances	1	4	3.40	.606
35	[SE] Comprehending the guidelines suggested on national curricula for subjects	1	4	2.89	.682
36	[SE] Comprehending school-wide curricula for subjects	1	4	3.03	.695
37	[SE] Comprehending grade-wide curricula for subjects	1	4	3.23	.649
38	[SE] Setting objectives for each period in all subjects you teach	2	4	3.35	.605
39	[SE] Adjusting time allocation for each period in all subjects you teach	1	4	3.30	.622
40	[SE] Selecting appropriate content to teach in each subject to help students achieve class objectives	2	4	3.34	.622
41	[SE] Adding, modifying, or deleting contents from the curriculum for each subject to help students achieve class objectives	1	4	3.28	.657
42	[SE] Implementing a curriculum of subjects in your class	2	4	3.26	.619
43	[SE] Developing instruments for assessing students' academic performances in each subject	1	4	2.96	.751
44	[SE] Evaluating students' academic performance in each subject	1	4	3.12	.696
45	[SE] Applying changes based on the results of an assessment	1	4	3.08	.705

46	[AT] I believe that teachers exercising curricular autonomy would enhance their understanding of what the national curriculum suggests for teaching.	1	4	3.33	.624
47	[AT] I believe that teachers exercising curricular autonomy would enhance the *professional knowledge* they need for better exercising their curricular autonomy in the future.	1	4	3.35	.622
48	[AT] I believe that teachers exercising curricular autonomy would gain the *practical experiences* they need for better exercising curricular autonomy in the future.	1	4	3.41	.612
49	[AT] I believe that teachers exercising curricular autonomy would improve *students' academic engagement*.	1	4	3.42	.627
50	[AT] I believe that teachers exercising curricular autonomy would improve *students' academic achievements*.	1	4	3.29	.681
51	[AT] I believe that teachers exercising curricular autonomy would be able to make curricula more appropriate for students of varying socio-economic circumstance.	1	4	3.37	.610
52	[SCP] At my school, teachers actively interact with principals.	1	4	3.10	.820
53	[SCP] At my school, the principal respects the teachers.	1	4	3.33	.747
54	[SCP] At my school, the principal understands teachers' concerns well.	1	4	3.12	.827
55	[SCP] At my school, the principal lets each department deal with its work autonomously once he sets general guidelines for them.	1	4	3.14	.866
56	[SCP] At my school, the principal supports teachers in a way that creates an environment in which they feel comfortable working.	1	4	3.22	.818
57	[SCC] At my school, teachers share their concerns regarding their work.	1	4	3.40	.722
58	[SCC] At my school, teachers share their concerns regarding their students.	1	4	3.55	.645
59	[SCC] At my school, teachers try to help resolve other teachers' concerns.	1	4	3.53	.618
60	[SCC] At my school, teachers cooperate with each other for school events.	1	4	3.56	.650
61	[SCC] At my school, teachers' behaviors do not lead to factionalism among co-workers.	1	4	3.45	.730
62	[SCC] At my school, teachers do not tend to identify and exploit their co-workers' weaknesses.	1	4	3.39	.759

63	[SCC] At my school, teachers do not argue about small issues.	1	4	3.57	.607
64	[SCTS] At my school, teachers understand the characteristics of their students well.	1	4	3.60	.525
65	[SCTS] At my school, teachers encourage students with words of praise.	2	4	3.59	.532
66	[SCTS] At my school, teachers interact in a friendly and positive manner with their students.	2	4	3.60	.550
67	[SCTS] At my school, teachers get along well with their students.	2	4	3.61	.522
68	[SCTS] At my school, teachers respect students' thoughts and opinions.	1	4	3.60	.694
69	[COL] In our society, the benefit of the common good is valued more highly than individual values.	1	4	2.59	.868
70	[COL] My own success depends on the success of those around me.	1	4	3.02	.782
71	[COL] I would freely put aside my own needs for the needs of the group.	1	4	2.86	.634
72	[COL] My rights may be limited if this is needed for promoting the common good.	1	4	2.86	.659
73	[AUT] In our society, hierarchical relationships among co-workers are essential for maintaining and managing any organization.	1	4	2.56	.764
74	[AUT] All family members should respect the male head of household.	1	4	2.46	.875
75	[AUT] The presence of a social class system is necessary for maintaining social order.	1	4	2.43	.824
76	[AUT] Subordinate staff members should respect the decisions of their superiors as much as possible.	1	4	2.55	.772
77	[WKL] I feel that the works related to manage my class take me a lot of time to accomplish.	1	4	3.34	.657
78	[WKL] I feel that my teaching workload is too heavy.	1	4	2.96	.767
79	[WKL] I feel that school-wide works assigned to me take me a lot of time to accomplish.	1	4	3.28	.711
80	[WKL] I feel that a wide range of school events take me a lot of time to accomplish.	1	4	3.18	.744
81	[WKL] I feel that I have to deal with too much administrative work.	1	4	3.18	.755
82	[WKL] Our school has many events that are not directly related to our curriculum.	1	4	2.80	.828

Appendix H: [Primary Study] Factor Loadings for EFA, Variances and Alpha

Current Curricular Autonomy

Item	Factor 1	2	3
1	.859	-.132	.012
2	.881	-.037	-.015
3	.761	.126	-.108
4	.651	.235	.004
5	.744	-.096	.008
6	.609	-.021	.180
7	.118	.820	-.088
8	-.048	.969	-.127
9	-.081	.660	.215
10	-.115	.653	.105
11	.250	.459	.115
14	-.018	.178	.687
15	.150	-.117	.823
16	-.008	-.088	.910
17	-.099	.188	.776
Eigenvalue	6.284	2.704	1.435
% of total variance	39.445	15.598	7.498
% of cumulative variance	39.445	55.043	62.541
Alpha	.889	.855	.892

Desired Curricular Autonomy

Item	Factor 1	2	3
18	-.215	.032	.861
19	-.062	-.031	.861
20	.001	-.013	.835
21	.213	.023	.665
22	.120	-.066	.601
23	.167	.113	.475
24	.789	-.030	.151
25	.850	.005	.077
26	.927	-.033	-.032
27	.891	.061	-.217
28	.663	.065	.090
31	.099	.846	-.055
32	-.078	.973	.027
33	.006	.895	.062
34	.040	.926	-.040
Eigenvalue	7.348	2.482	1.436
% of total variance	47.142	14.537	7.996
% of cumulative variance	47.142	61.679	69.675
Alpha	.876	.921	.956

Self-efficacy for Exercising Curricular Autonomy Autonomy Exercise

Item	Factor 1
35	.724
36	.765
37	.787
38	.814
39	.788
40	.813
41	.809
42	.775
43	.672
44	.738
45	.630
Eigenvalue	6.736
% of total variance	57.472
% of cumulative variance	57.472
Alpha	.935

Outcome Expectancy to Curricular Autonomy Exercise

Item	Factor 1
46	.787
47	.828
48	.800
49	.734
50	.788
51	.783
Eigenvalue	4.096
% of total variance	61.964
% of cumulative variance	61.964
Alpha	.906

School Culture

Item	Factor 1	2	3
52	-.130	.719	.242
53	-.131	.835	.136
54	-.088	.721	.254
55	.228	.674	-.183
56	.212	.833	-.301
60	.046	-.005	.673
61	.110	.035	.729
62	.172	-.051	.700
64	.790	.005	.103
65	.822	-.015	.090
66	.923	-.001	.027
67	.875	.062	-.011
68	.832	-.003	.080
Eigenvalue	6.769	1.862	1.278
% of total variance	49.848	12.115	6.835
% of cumulative variance	49.848	61.964	68.798
Alpha	.880	.804	.948

Confucian Values

Item	Factor 1	Factor 2
71	-.094	1.006
72	.191	.558
73	.592	.105
74	.626	-.003
75	.952	-.128
76	.545	.255
Eigenvalue	2.902	1.219
% of total variance	41.475	16.353
% of cumulative variance	41.475	57.827
Alpha	.742	.788

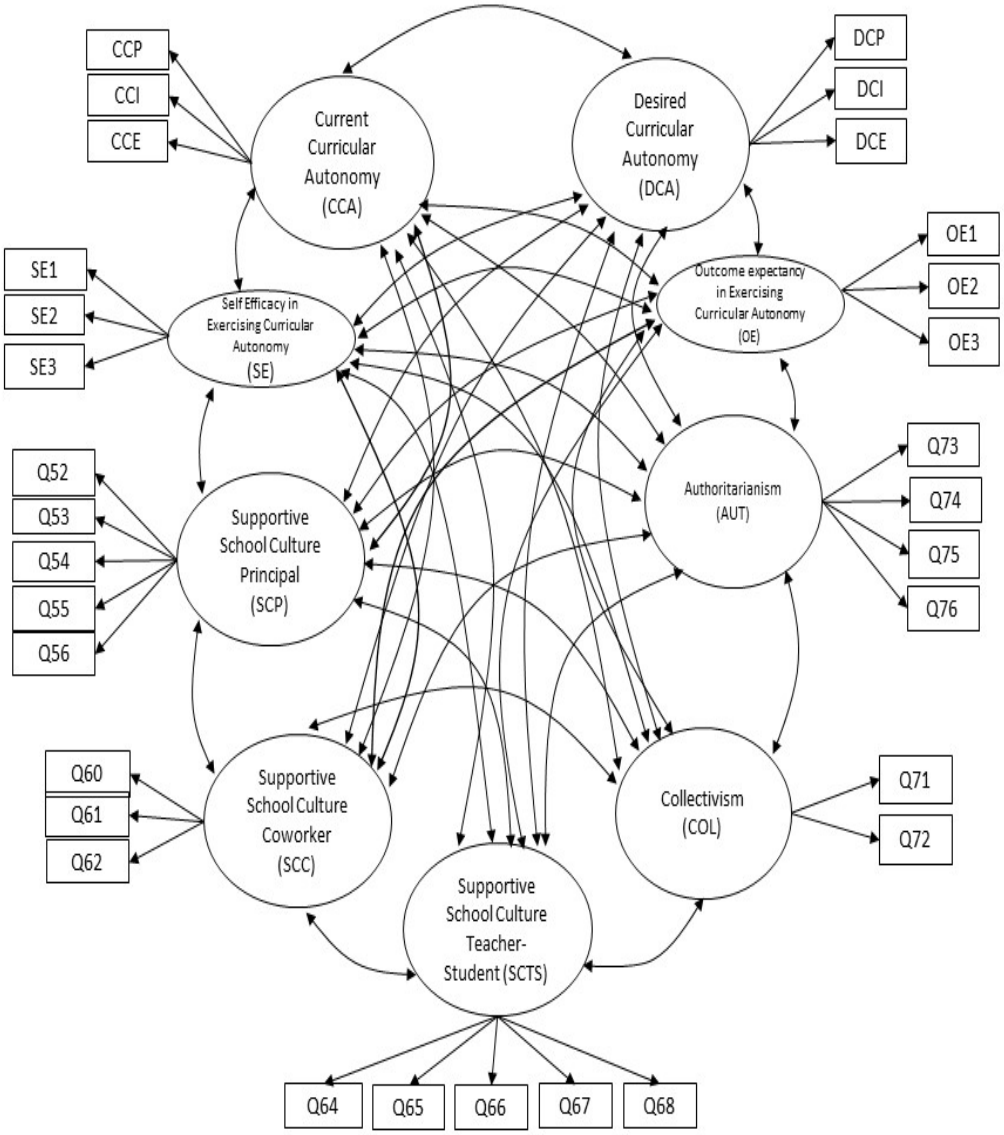
Workload

Item	Factor 1
77	.698
79	.862
80	.707
81	.800
Eigenvalue	2.762
% of total variance	59.209
% of cumulative variance	59.209
Alpha	.850

Appendix I: [Primary Study] Factors Extracted and Number of Corresponding Items

Factor Number	Factor Name	Items
1	Current curricular autonomy for plan (CCP)	6
2	Current curricular autonomy for implementation (CCI)	5
3	Current curricular autonomy for evaluation (CCE)	4
4	Desired curricular autonomy for plan (DCP)	6
5	Desired curricular autonomy for implementation (DCI)	5
6	Desired curricular autonomy for evaluation (DCE)	4
7	Self-efficacy for exercising curricular autonomy (SE)	11
8	Attitudes towards curricular autonomy exercise (AT)	6
9	Supportive school culture led by principal (SCP)	5
10	Supportive school culture led by co-workers (SCC)	3
11	Supportive school culture led by teacher-student relationship (SCTS)	5
12	Collectivism (COL)	2
13	Authoritarianism (AUT)	4
14	Workloads (WKL)	4

Appendix J: [Primary Study] CFI Final Measurement Model



Appendix K: [Primary Study] CFI Final Measurement Model Factor Loadings

Factor	Survey Items	Loadings
1. CCA	CCP (A parcel created for items: 1,2,3,4,5,6)	.552
	CCI (A parcel created for items: 7,8,9,10,11)	.830
	CCE (A parcel created for items: 14,15,16,17)	.617
2. DCA	DCP (A parcel created for items: 18,19,20,21,22,23)	.568
	DCI (A parcel created for items: 24,25,26,27,28)	.862
	DCE (A parcel created for items: 31,32,33,34)	.620
3. SE	SE1 (A parcel created for items: 35,36,37,38)	.798
	SE2 (A parcel created for items: 40,41,42,43)	.879
	SE3 (A parcel created for items: 44,45,46,47)	.768
4. AT	AT1 (A parcel created for items: 48,49)	.855
	AT2 (A parcel created for items: 50,51)	.911
	AT3 (A parcel created for items: 52,53)	.813
5. SCP	Item 52	.791
	Item 53	.894
	Item 54	.871
	Item 55	.722
	Item 56	.828
6. SCC	Item 60	.627
	Item 61	.838
	Item 62	.769
7. SCTC	Item 64	.784
	Item 65	.839
	Item 66	.879
	Item 67	.866
	Item 68	.669
8. COL	Item 71	.826
	Item 72	.784
9. ATU	Item 73	.802
	Item 74	.705
	Item 75	.838
	Item 76	.797

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Technical Reports

Anderson, J. A., Ergulac, F., Cornell, H. R., Ruschman, N. L., & **Min**, M. (2016). *Community Impact Study*. Families, Communities, & Schools (FoCuS). Center for P-16 Research and Collaboration. Indiana University.

Cornell, H.R., **Min, M.**, Chen, L., Holland, A.A., Anderson, J.A. (2015). *Report of the 1st Annual HFI IN MIECHV Survey for HFI Home Visitors*. Collaborative Research Initiative. Center for Research on Learning and Technology. Indiana University.

Holland, A.A. & **Min, M.** (2014). *Community Perceptions of Underage Drinking and Substance Abuse Briefs for SEL3CT Counties (Franklin, Ripley, Dearborn, Ohio, Decatur, Switzerland)*. Collaborative Research Initiative. Center for Research on Learning and Technology. Indiana University.

Wright, L., Anderson, J.A., Hurwitz, S., Howland, A,A., Wang, T., Cornell, H.R., & **Min, M**. (2014). *Comprehensive Data Review on One Community One Family (Briefs for Caregiver Profile & United Families)*. Collaborative Research Initiative. Center for Research on Learning and Technology. Indiana University.

Min, M. & Anderson, J.A. (2014). *Preliminary Review of 'Kids on the Block' and 'Stay Smart' programs*. Collaborative Research Initiative. Center for Research on Learning and Technology. Indiana University.

CONFERENCE ACTIVITY

2017 **Min, M.** The Relationship among School Culture, Self-Efficacy, and South Korean Teachers' Agency in Curricular Autonomy Exercise, American Educational Research Association, San Antonio, TX, April 27-May 1.

2017 **Min, M.** & Kubow, P. K. Culture matters: Influences of Confucian values on South Korean elementary school teachers' autonomy exercise over curriculum, Comparative and International Education Society, Atlanta, GA, March 5-9.

2016 **Min, M.** South Korean teachers' curriculum adaptation patterns and teacher characteristics that influence them, under the national curriculum reform, American Association for Teaching and Curriculum, Grand Rapids, MI, October 5-7.

2016 **Min, M.** The effects of demographic factors on South Korean elementary school teachers' agencies of exercising curricular autonomy, American Association of Behavioral and Social Sciences Conference, Las Vegas, NV, January 30-31.

2015 Exploratory case studies: How educators in higher education perceive their experiences with technology-enhanced curriculum, Ethnographic & Qualitative Research Conference, Las Vegas, NV, February 9-10.

2015 **Min, M.** Anderson, A.J., & Chen, M. Integrative literature review with Nvivo: Full service community schools. American Association of Behavioral and Social Sciences Conference, Las Vegas, NV, February 9-10.

2014 Uzon, E., Galindo, E., & **Min, M.** Learning to Pay Attention to Children's Thinking: Design Ideas for Creating a Videocase, National Council of Teachers of Mathematics Regional Conference, Indianapolis, IN, October 29-31.

2014 Anderson, A.J., Chen, M., **Min, M.** Transforming Schools through Cross-System Collaboration in the United States, Annual Community Schools National Forum, Cincinnati, OH, April 9-11.

FELLOWSHIPS & AWARDS

2017 Joyce Cain Award, Comparative and International Education Society (CIES)

2017 Graduate Student Travel Award for AERA, Indiana University

2016 Shirley Engle Fellowship, Indiana University

2016 Achasa Beechler Doctoral Dissertation Fellowship, Indiana University

2015 Graduate Student Travel Award for EQRC, Indiana University

2010 Innovative Elementary School Teacher Award (Superintendent Award), Seoul Metropolitan Office of Education, Seoul, South Korea

2008 Local Education Officer Award, Seoul Dongbu District Office of Education, Seoul, South Korea

GRANTS

2015 Co-Investigator and Research Analysts (PI: Dr. Allison, A. Holland), Southeast Indiana Substance Abuse Prevention Evaluation Project. Funding Agency: The Dearborn Community Foundation, $62,568

2011 Primary Investigator, After School Video-conferencing English Class Project. Funding Agency: Seoul Metropolitan Office of Education, Seoul, South Korea, $96,560.

PROFESSIONAL SERVICE

To Profession

Conference Proposal Reviewer, American Association for Teaching & Curriculum, 2016

Manuscript Reviewer, *Curriculum and Teaching Dialogue*, 2017-present

Manuscript Reviewer, *Journal of Teacher Education*, 2015

Webmaster, Indiana Association of College for Teacher Education, 2012-present

To Campus or Department

Balfour Scholars Program Instructor, Center for P-16 Research and Collaboration, Indiana University, 2016

Conference Committee, Curriculum and Instruction Research and Creative Activity Symposium (CIRCAS), School of Education, Indiana University, 2014

To Community

Volunteer Math Teacher, The Project School, Bloomington, Indiana, 2016

Grade 3 and 5 Math Tutor, Bloomington, Indiana 2016